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Subject: *Options to Enhance the Long-term Viability of the Essential Air Service Program*

Over two decades ago, the Congress deregulated the airline industry, phasing out the federal government's control over domestic fares and routes served and allowing market forces to determine the price, quantity, and quality of service. Concerned that air service to some small communities would suffer in a deregulated environment, the Congress established the Essential Air Service (EAS) program as part of the Airline Deregulation Act of 1978. The act guaranteed that communities served by air carriers before deregulation would continue to receive a certain level of scheduled air service. Special provisions were provided for guaranteeing service to Alaskan communities. In general, the act guaranteed continued service by authorizing the Civil Aeronautics Board, whose duties were later transferred to the Department of Transportation (DOT), to require carriers to continue providing service at these communities. If an air carrier could not continue that service without incurring a loss, DOT could then use EAS funds to award that carrier, or another carrier willing to provide service, a subsidy. These subsidies are intended to cover the difference between a carrier's projected revenues and expenses and provide a minimum amount of profit.

The Congress has expressed concern that trends in the aviation industry and rising costs may jeopardize the program's long-term viability. H. Rpt. 107-108 directs GAO to conduct a thorough examination of the program. As agreed with staff of the relevant authorizing and appropriations committees, we focused on the following research questions:

- What is the status of the program, and how has it changed since 1995?
- What major factors may affect potential future subsidy requirements?
- What are some options to revise the program to enhance its long-term viability, and what are the associated potential effects?

During the weeks of August 19 and August 29, 2002, GAO briefed staff of the House and Senate appropriations and authorization committees on the results of its work. References within this report relate to figures included in the briefing slides in enclosure I.

Results in Brief

As of July 1, 2002, the EAS program provided subsidies to air carriers to serve 114 communities--79 in the continental United States and another 35 in Alaska, Hawaii, and Puerto Rico. From 1995 to July 2002, the net number of EAS-subsidized communities increased by four in the continental United States. That number is expected to increase further, because air carriers now providing unsubsidized service to 26 communities have notified DOT that they intend to discontinue service there. According to DOT, 12 of those 26 communities meet the eligibility criteria for subsidized service. DOT is requiring carriers to continue serving those 12 communities, and is incurring subsidy liabilities for that service. Federal appropriations to the program have more than tripled since 1995, rising from $37 million to $113 million in fiscal year 2002 (all dollar figures in this product are expressed in constant 2002 dollars). Over the same period, the average subsidy per community served in the continental United States rose from nearly $424,000 in 1995 to an estimated $828,000 in 2002. For communities in Alaska, Hawaii, and Puerto Rico, the average subsidy per community served rose from just over $90,000 to an estimated $251,000 in 2002. Assuming that it would award subsidies to all eligible communities where carriers had filed notice of their intent to discontinue service, DOT projects that in fiscal year 2002 it will award $97 million in annual subsidies out of the appropriated $113 million. Total passenger traffic at EAS-subsidized communities decreased by 20 percent since 1995, and the median number of passenger enplanements fell to an estimated 10 per day (just over 3 passengers per flight).

Several factors—including increasing carrier costs, limited passenger revenue, and increasing numbers of eligible communities requiring subsidized service—are likely to affect potential future subsidy requirements of the EAS program. Carriers' operating costs have increased over time, in part because of costs associated with meeting federal regulatory requirements regarding safety in small aircraft. Carrier costs may increase further if trends in the retirement of smaller turboprop aircraft continue and carriers begin to use larger aircraft on these routes. In contrast, carrier revenues have been limited because many individuals traveling to or from EAS-subsidized communities choose not to fly from the local airport, but rather to use other, larger nearby airports, which generally offer more service at lower airfares. Lastly, the number of subsidy-eligible communities has increased, and may continue to grow in the near term.

We identified and evaluated major categories of options to enhance the long-term viability of the EAS program, each of which has associated potential effects. Certainly, the viability of the EAS program can be ensured without any changes to the program as long as the Congress continues to fully fund it. However, because there are clear indications that EAS program costs will increase in the near term, federal fiscal discipline may require various changes to the program. In no particular order, the options we identified to control costs and improve the program's sustainability include (1) targeting subsidized service to more remote communities by changing eligibility criteria, (2) better matching capacity with community use by increasing the use of smaller aircraft and restricting little-used flight frequencies, (3) consolidating service to multiple communities into regional airports, and (4) changing the form of the federal assistance from carrier subsidies to local grants. Potential positive effects include decreasing federal costs, increasing passenger traffic, and creating community choice for transportation options. Potential negative effects also exist, such as increased passenger inconvenience and the potential negative effect on local economies of lost scheduled airline service. We are not making any specific recommendations regarding how the Congress might consider changing the program.

Background

Air service is positively correlated with various measures of communities' economic activity. As we reported earlier this year, communities with larger, wealthier and more economically active population bases tend to have more air service than smaller communities.[1] Communities that receive air service subsidized through the EAS program tend to be much smaller and have less economic activity than those small communities that receive air service through small or nonhub airports.[2] The figure on slide 6 describes certain economic characteristics of small communities with and without subsidized air service.

To be eligible for subsidized service, communities must meet three general requirements. They must have received scheduled commercial passenger service as of October 1978, may be no closer than 70 highway miles to a medium- or large-hub airport, and must require a subsidy of less than $200 per person (unless the community is more than 210 highway miles from the nearest medium- or large-hub airport, in which case no average per-passenger dollar limit applies).[3]

Federal law defines the service that subsidized communities are to receive under the EAS program.[4] Carriers providing EAS flights are required to use aircraft with at least 15 seats unless the community seeks a waiver. The law specifies that communities that require subsidized service are entitled to a minimum of 12 round-trip flights per week—2 daily round-trip flights 6 days per week, with not more than one intermediate stop on each flight to a hub airport. However, DOT may authorize more service than the minimum specified by statute. Flights are to occur at "reasonable times" and at prices that are "not excessive." EAS operations to communities in Alaska are subject to different requirements (e.g., carriers may use smaller aircraft).

Air carriers, not the communities themselves, apply directly to DOT for EAS subsidies. Air carriers set the subsidy application process in motion when they file a 90-day notice of intent to suspend or terminate service. If no air carrier is willing to provide replacement air service without a subsidy, DOT solicits proposals from carriers who are willing to provide service with a subsidy. Carriers requesting a subsidy must document that they cannot profitably serve the

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[1] U.S. General Accounting Office, *Commercial Aviation: Air Service Trends at Small Communities Since October 2000* , GAO-02-432 (Washington, D.C.: Mar. 29, 2002). As a measure of a community's level of economic activity, we used manufacturing earnings.

[2] The nation's commercial airports are categorized into four main groupings based on the number of passengers boarding an aircraft (enplaned) for all operations of U.S. carriers in the United States. A nonhub has less than 0.05 percent of the total annual passenger enplanements in the United States in any given year. A small hub has at least 0.05 percent, but less than 0.25 percent, of total U.S. enplanements. A medium hub has at least 0.25 percent and less than 1.0 percent of total U.S. enplanements, and a large hub has 1.0 percent or more of total U.S. enplanements. These definitions are contained in statute.

[3] The average subsidy per passenger does not equate to a specific portion of a passenger's ticket price paid for by EAS funds. Ticket pricing involves a complex variety of factors relating to the demand for travel between two points, the supply of available seats along that route, competition in the market, and how air carriers choose to manage and price their available seating capacity.

[4] 49 USC 41732.

community without a subsidy. DOT requires that air carriers submit historical and projected financial data sufficient to support a subsidy calculation. The requirements include profit-or-loss statements that project operating expenses (e.g., fuel costs) and operating revenues (e.g., passenger revenues) that would result from serving the particular community. DOT then reviews these data in light of the aviation industry's pricing structure, the size of aircraft required, the amount of service required, and the number of projected passengers who would use this service at the community.[5] Finally, DOT selects a carrier and sets a subsidy amount to cover the difference between the carrier's projected cost of operation and its expected passenger revenues, while providing the carrier with a profit element equal to 5 percent of total operating expenses, according to statute.

After DOT selects an air carrier to provide subsidized service to an EAS community, that agreement is subject to renewal, generally every 2 years, at which time other air carriers are permitted to submit proposals to serve that community with or without a subsidy. At any time throughout the year, an air carrier providing unsubsidized service to an EAS-eligible community can apply for a subsidy if the carrier determines that it can no longer provide profitable service. According to DOT, once a subsidy rate is agreed to, DOT compensates a carrier for the flights completed, on a monthly basis.[6]

Program Costs Have Increased More Than Passenger Use

As of July 1, 2002, the EAS program provided subsidies to air carriers to serve 114 communities--79 in the continental United States, and another 35 in Alaska, Hawaii, and Puerto Rico.[7] In 2000, approximately 477,000 passengers enplaned at airports that received EAS-subsidized service—less than 0.1 percent of the more than 700 million passenger enplanements in the United States that year.[8] Thirteen regional air carriers served the subsidized communities in the continental United States, and 14 served those in Alaska, Hawaii and Puerto Rico. The carriers serving the communities in the continental United States typically used turboprop aircraft seating 19 passengers, whereas in Alaska, Hawaii, and Puerto Rico, the most commonly used aircraft seated 4 to 9 passengers. As of mid-June 2002, the federal government had obligated $82 million to these air carriers.[9]

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[5] DOT officials stated that they check the reasonableness of the cost and revenue information it receives from the air carriers against other data reported to DOT and in documents filed with the Securities and Exchange Commission.

[6] Total monthly payments to each carrier depend on the extent to which the carrier met various performance targets (e.g., percent of scheduled departures actually performed).

[7] There are 31 subsidized communities in Alaska, including 9 Kodiak bush points.

[8] Data for 2001 were not available at the time of our analysis.

[9] In February 2002, DOT increased the subsidies paid to EAS air carriers by an amount equal to 30 percent of the carriers' forecast revenue on an interim basis (DOT order 2002-2-13). DOT adjusted the subsidies in recognition of the EAS carriers' "precipitous rise in costs" accompanied by a "substantial drop in revenue" that following the events of September 11, 2001. The order expressed a concern that, absent some acknowledgment of the carriers' financial position, some carriers could be forced to cease operations, vitiating the program. The order noted that these losses are not directly attributable to losses incurred as a result of federal actions taken because of the terrorist attacks—losses for which the government provided

As of July 1, 2002, five regional carriers served a majority of the EAS markets in the continental United States. Those five carriers served 67 EAS subsidized communities in the continental United States and received 85.6 percent of subsidies awarded for service to communities in those 48 states. Of the five carriers, Great Lakes received the largest amount of subsidies ($22.4 million) for serving 29 communities. Big Sky Airlines served 15 subsidized communities, received $13.2 million, and had the highest average subsidy per passenger. One reason for Big Sky's higher average subsidy per passenger is that the airline served a number of communities that are great distances from the hub airport (e.g., Wolf Point, Montana, which is 212 air miles to Billings) but carried few passengers.[10] Other things being equal, carrier costs increase with the distance flown. Colgan Air, which provides subsidized service to seven communities, has the highest average subsidy per community—about $1.2 million. The figure on slide 12 summarizes the subsidy and service levels for the top five subsidized carriers in the continental United States

While the net number of subsidized EAS communities increased by four from 1995 through July 1, 2002, officials at DOT say that number will increase further during this fiscal year.[11] At the beginning of calendar year 2002, DOT subsidized service to 75 communities in the continental United States. Since then, carriers notified DOT that they would terminate nonsubsidized service at 26 communities in the continental United States and Alaska (which would leave those communities without scheduled air service), 15 of which are subsidy eligible. DOT has required carriers to continue service to those communities.[12] As of July 1, 2002, DOT had issued orders establishing subsidy levels to 3 of those 15 communities. DOT was in the process of negotiating subsidies for service to the remaining 12 communities, and was incurring subsidy liabilities for that continued service.

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compensation under the Air Transportation Safety and System Stabilization Act, Public Law 107-42. Through July 2002, the subsidized carriers have received nearly $50 million in grants from that act.

[10] In July 2002, DOT transferred the subsidy for serving seven communities in Oklahoma, Arkansas, and Texas previously served by Big Sky Airlines to Mesa Airlines. Under the new order, the total subsidy awarded for these locations is approximately $6.7 million, or about $1.1 million less than the subsidies earlier given to Big Sky.

[11] We selected 1995 as the base year for comparison because it was the most recent year in which the EAS program was unaffected by a major change in appropriations and because it preceded a major federal regulatory change in U.S. airline safety standards. In 1996, the Federal Aviation Administration changed the air safety rules for commuter air carriers to match the operational, equipment, and performance safety standards required of large air carriers—generally, those that use large jet aircraft, having a seating capacity of more than 30 persons. Collectively known as the "Commuter Safety Initiative," these rules imposed many new requirements on commuter air carriers that flew aircraft equipped with 10 seats or more. For example, this initiative required commuter air carriers to appoint safety officers, improve ground-deicing programs, and carry additional passenger safety equipment (e.g., medical kits). The rule also increased training requirements for pilots and further limited the number of duty hours crewmembers can fly. See U.S. General Accounting Office, *Essential Air Service: Changes in Subsidy Levels, Air Carrier Costs, and Passenger Traffic*, GAO/RCED-00-34 (Washington, D.C.: Apr. 14, 2000).

Between 1995 and 1999, the total number of subsidized communities decreased by a net 6 from 95 to 89. Eight communities that had not received subsidized service in 1995 gained it in 1999, and 14 communities lost their eligibility for subsidized service for a variety of reasons. Since 1999, the net number of communities in the continental United States receiving subsidized EAS operations has increased by 10.

[12] Under 49 USC 41734, carriers must file a notice with DOT of their intent to suspend service, and DOT is compelled by statute to require those carriers to continue serving those communities for a 90-day period.

Total passenger enplanements at EAS-subsidized communities decreased about 20 percent from 1995 through 2000, falling from approximately 592,000 to about 477,000. The median number of passengers carried each day for each subsidized community in the continental United States also decreased, dropping from 11 in 1995 to 10 in 2000 (just over 3 passengers per flight). Furthermore, if total EAS-subsidized passenger enplanements in 2002 equal the total for 2000, the average subsidy per passenger in the continental United States will rise to an estimated $229—a figure that, in the aggregate, exceeds the limit for individual communities within 210 miles of a medium- or large-hub airport—almost tripling from the $79 average subsidy per passenger in 1995. The figure on slide 13 summarizes the service changes and projected changes at subsidized communities from 1995 to 2002.

EAS funding has tripled since 1995. EAS program appropriations increased from $37 million in fiscal year 1995 (in constant 2002 dollars) to $113 million beginning in fiscal year 2002.[13] Consequently, the average subsidy per community served in the continental United States rose from nearly $424,000 in 1995 to an estimated $828,000 in 2002. For communities in Alaska, Hawaii, and Puerto Rico, the average subsidy per community served rose from just over $90,000 to an estimated $251,000 in 2002. Assuming that it would award subsidies to all eligible communities where carriers have filed notice of their intent to discontinue service, DOT projects that total awards for fiscal year 2002 will be $97 million.[14] The figure on slide 14 summarizes the EAS program budget history from 1995 to 2002.

Several Factors Are Likely to Increase Future Subsidy Requirements

Several factors—including increasing carrier costs, limited passenger revenue, and increasing numbers of eligible communities requiring subsidized service—are likely to affect future demands on the EAS program.

Carrier costs for operating 19-seat turboprop aircraft--the size of aircraft most commonly used at EAS-subsidized communities--have increased over time. According to data reported to DOT by the air carriers, operating costs associated with the Beech 1900 turboprop--which serves the majority of the subsidized communities in the continental United States--have increased by about 18 percent since 1995, from $589 per block hour in 1995 to $695 in 2000.[15] Costs associated with operating other turboprop aircraft have also increased during the period. We reported in 1999 that carrier costs of operating turboprop aircraft rose beginning in 1996 because of the costs of compliance with new federal regulatory requirements relating to safety on commuter air carriers. The figure on slide 16 summarizes the changes in operating costs for the Beech 1900.

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[13] Of that total, Congress provided $13 million in the Department of Transportation Appropriations Act for fiscal year 2002, in addition to the recurring annual appropriation of $50 million derived from overflight user fees. Another $50 million was added in a Department of Defense supplemental appropriations act, Public Law 107-117, following the September 11, 2001, attacks. All dollar figures are in constant 2002 dollars.

[14] For locations where carriers have filed notices of intent to leave, the subsidies would be retroactive to the 91st day after the date contained in the notification, according to DOT officials.

[15] Direct operating costs include costs associated with pilots, fuel, maintenance, and capital expenses (e.g., leasing costs or depreciation). These costs are per block hour, which is a common measure of aircraft usage. A block hour begins when the aircraft backs away from the gate and ends when the aircraft pulls into the gate at the destination.

Carrier costs may increase further if trends in the retirement of smaller turboprop aircraft continue. Carriers have retired large numbers of 19-seat aircraft from their fleets over the past few years. According to data from an industry trade association, as of January 1, 1999, U.S. regional carriers operated 368 19-seat aircraft. As of January 1, 2002, that number had dropped to 154. The average seating capacity of aircraft in regional service increased from 24.6 in 1995 to 33.5 in 2001. Those larger aircraft—especially the "regional jet" aircraft that many carriers are incorporating into their fleet—are more expensive than 19-seat aircraft to operate. For example, according to data for 2000 from DOT, total operating costs for the 30-seat Saab 340 were $780 per block hour, and total operating costs for the 50-seat Bombardier CRJ-100 regional jet were $1,212 per block hour.

EAS-subsidized communities tend to generate limited passenger revenue for two fundamental reasons. First, these communities (and the surrounding geographic areas) have small populations. Second, of the relatively few travelers those areas tend to generate annually, many choose either to drive to their destination or to fly to and from other, larger airports (a phenomenon commonly referred to as "passenger leakage"). EAS community airports often serve less than 10 percent of the local passenger traffic. For instance, information provided by airport officials at Watertown, New York, indicated that only about 3 percent of local passengers use that airport. Most travelers choose to drive to and fly from the airport at Syracuse, New York, about 65 miles south of Watertown on Interstate 81. Over half of subsidized communities in the continental United States are within 125 miles, or roughly 2 hours highway driving time, of a larger airport. The figures on slides 17 and 20 summarize the proximity of subsidized communities to other service options.

Passengers drive to other airports to get lower airfares and improved service options. For example, one-day advance purchase (i.e., business) fares between Syracuse and Los Angeles, as of July 22, 2002, were approximately $455 (or about 58 percent) less expensive than those between Watertown and Los Angeles. As of July 31, 2002, Watertown was served by a single carrier with three daily nonstop flights to Pittsburgh, whereas Syracuse—a small hub--was served by seven different carriers operating 107 daily nonstop flights to 17 different destinations. Similarly, business fares between Beckley, West Virginia (an EAS-subsidized community), and Denver were $425 (67 percent) more expensive than those available at Charleston, West Virginia (a non-hub 69 miles north of Beckley on Interstate 77). As of July 31, 2002, Beckley was served by a single carrier operating three daily round trips to two different destinations, while Charleston was served by five different airlines providing 72 daily nonstop flights to 11 different destinations. In other markets, carriers had set prices that may influence leisure travelers at EAS communities. For example, average 21-day advance purchase fares available for travel between Jamestown, North Dakota (an EAS-subsidized community), and Denver were $170 (54 percent) more expensive than comparable fares available at Fargo, North Dakota, 99 miles east on Interstate 94. Similarly, average 21-day advance purchase fares between Devil's Lake, North Dakota (an EAS-subsidized community), and Chicago were $129 (43 percent) more expensive than comparable fares available at Grand Forks, 146 miles east.[16] The figures on slides 18 and 19 illustrate comparisons of airfares at subsidized and larger airports.

[16] The fares listed for the North Dakota airports represent the average of the lowest-available fares obtained on a weekly basis between December 5, 2001, and May 30, 2002.

However, it is important to note that EAS carriers typically do not set the airfares charged for the major markets for EAS travelers. Instead, fares are set by the major network airlines, such as US Airways and Northwest Airlines, with which EAS carriers usually have contractual agreements. Among other things, those agreements may specify the terms under which the EAS carriers and their major network airline partners agree to share the revenue generated at these communities. Depending upon the exact agreement, the EAS carrier usually sets fares for travel only in "local" markets (i.e., for origin and destination travel between the EAS community and the connecting hub, such as between Beckley and Pittsburgh), while the major airline sets the fares for travel between the EAS community and the key destinations "beyond" the connecting hub (i.e., fares between Beckley and Los Angeles).

Finally, EAS program costs are also likely to increase because more communities may require subsidized service. As noted earlier, since September 2001, carriers filed notices to discontinue unsubsidized service at 15 additional communities. According to officials at DOT, additional small communities will likely lose unsubsidized service in the future—especially those served by a single carrier. As of October 2001, there were 98 small communities being served by one carrier. Of the 98, 25 have smaller populations and lower levels of employment than the typical EAS-subsidized community, 21 have lower levels of income per capita, and 35 have lower levels of manufacturing earnings.[17]

On the other hand, the increase in program costs may be restrained because some communities that now receive subsidized service may lose their eligibility. The combination of decreased passenger traffic and increased subsidy levels means that some communities may exceed the maximum $200 subsidy per passenger statutory limit for communities within 210 miles of a medium- or large-hub airport. Estimating the number of communities whose eligibility may be affected is difficult because of uncertainty about passenger traffic levels at individual communities. This may be particularly true now, given the broad decline in the national economy that began early in 2001 and the events of September 11, 2001. Nationally, for the period January through July 2002, domestic passenger enplanements decreased by nearly 12 percent compared to the same period in 2001.[18] If passenger traffic at subsidy-eligible communities in 2002 equals the same levels recorded for 2000, we estimate that 11 communities in the continental United States will exceed the per passenger subsidy limit. In 2002, carriers received $11 million to provide subsidized service to those communities.

While total EAS obligations could be reduced if some of those communities were dropped from the program, DOT has not always done so. As we reported in 2000, before removing a community's subsidized service, DOT considers extenuating circumstances that could have caused a temporary decline in passenger traffic. For various reasons (e.g., service interruptions), DOT allowed eight communities located within 210 miles of a medium- or large-hub community

[17] In addition, some communities may lose service as various air carriers retire their turboprop aircraft. For example, Atlantic Coast Airlines, Inc., which operates as a United Express and a Delta Connection carrier, is planning to become an "all-jet" carrier by the end of 2003. When it retired its 19-seat turboprop aircraft in December 2001, it discontinued service to two small communities. Other regional carriers, such as American Eagle and Continental Express, have also announced plans to become "all-jet" carriers.
[18] These data cover operations of large air carriers only, as reported by the Air Transport Association.

airport to receive subsidized service in 1999, even though the subsidies per passenger exceed the $200 limit.[19]

Options to Enhance the Long-term Viability of the EAS Program and Some Associated Potential Effects

While the long-term viability of the EAS program could be ensured without any changes to the program as long as the Congress continues to fully fund it, there are indications that those costs will increase over time, particularly as the number of eligible communities requiring subsidized service increases. Federal fiscal discipline may require various changes to the program. As requested, we identified and evaluated options to control cost increases and improve the program's sustainability. In no particular order, they include (1) targeting subsidized service to more remote communities, (2) better matching capacity with community use, (3) consolidating service to multiple communities into regional airports, and (4) changing the form of the federal assistance from carrier subsidies to local grants. Each option presents different positive and negative effects. The positive effects include lowered federal costs, increased passenger traffic at subsidized communities, and enhanced community choice of transportation options. Potential negative effects include increased passenger inconvenience and the potential negative effect on local economies of lost scheduled airline service.

Targeting Subsidized Service on More Remote Communities

To target subsidized service to more remote communities, (1) the highway distance criteria between EAS-eligible communities and the nearest qualifying airport could be increased and (2) the definition of qualifying nearby airports could be expanded to include small hubs and nonhubs with jet service from at least two competing carriers. Currently, to be eligible for EAS-subsidized service, a community must be more than 70 highway miles from the nearest medium- or large-hub airport. If the distance criterion was increased to 125 highway miles and the qualifying airports were expanded as described, 44 current EAS-subsidized communities would no longer qualify for subsidies, and travelers at those communities would need to drive to the nearby larger airport to access air service. The figure on slide 23 summarizes the number of communities and passengers potentially affected, as well as the potential savings in federal subsidies.

Potential Positive and Negative Effects

Limiting subsidized service to more remote communities could potentially save the federal government $36.6 million annually (in current dollars). This estimate assumes that the total subsidies now in effect at the communities that might lose their eligibility would not be obligated to other communities, and that those amounts would not change over time. On the other hand, the passengers who now use subsidized service at those 44 airports--approximately 229,000 in 2000--would be inconvenienced because of the increased driving required to access air service at the nearest hub airport. In addition, implementing this option could potentially negatively impact the economy of the affected communities. For instance, officials from some communities, such

[19] DOT officials note that, while the governing statutes include a $200 per passenger subsidy cap, they are silent on how that calculation is to be made (e.g., using passenger enplanement data for the most recent calendar year or using the average of the last 3 years).

as Brookings, South Dakota, claim that they are able to attract and retain local businesses because of several factors relating to the quality of life there—with one important factor being its scheduled air service.[20]

Better Matching Capacity with Community Use

Passenger enplanement data indicate that relatively few passengers fly in many EAS markets, and that, on average, most EAS flights operate with aircraft that are largely empty. To better match capacity with community use, air carriers could reduce unused capacity, either by using smaller aircraft or by reducing the number of flights. Carriers could use smaller aircraft. For instance, at Alamogordo, New Mexico, the community chose to seek a waiver from DOT so that it could obtain service from a carrier that operates four daily departures using a 9-seat aircraft in place of a carrier operating three daily departures with a 19-seat aircraft. The figure on slide 24 compares the old and new air service at Alamogordo. Another way to better match capacity with use is for carriers to reduce the number of daily departures at communities where passenger traffic has not responded to increasing flight frequencies. For example, since 1995, total passenger traffic dropped at 9 of 24 communities where carriers added flight frequencies.

Potential Positive and Negative Effects

Better matching capacity with community use could save federal subsidies. For instance, limiting the number of daily subsidized departures to three could save federal subsidies by reducing carrier costs in some locations. Federal subsidies could also be lowered at communities where carriers used smaller—and hence less costly--aircraft. As suggested at Alamogordo, those subsidies may be reduced even if the number of daily flight frequencies rises. On the other hand, there are a number of potential disadvantages. For example, passenger acceptance is uncertain. Representatives from some communities, like Beckley and Bluefield, West Virginia, said that passengers who are already somewhat reluctant to fly on 19-seat turboprops would be even less willing to fly on smaller aircraft. Such negative passenger reaction may cause more people to drive to larger airports or simply drive to their destinations. Additionally, the loss of some daily departures at certain communities would likely inconvenience a relatively small number of passengers. Lastly, reduced capacity may have a negative impact on the economy of the affected community.

[20] Although scheduled commercial air service is positively correlated with local economic activity, we were unable to locate reliable studies that describe the extent to which scheduled commercial air service is directly responsible for economic development in small communities in the United States (i.e., whether air service precedes, follows, or develops simultaneously with local economic activity). Various calculations have been made estimating the direct and indirect financial contributions that air service makes to local communities. But questions arise about the relative contributions that scheduled commercial air service makes as an effective economic asset to a community. For example, the value of scheduled air service to a community may be related to use of that local air service compared with the use, availability, and quality of alternatives.

Consolidating Subsidized Service Now Provided to Multiple Communities into Service at Regional Airports

As of July 1, 2002, 21 EAS subsidized communities were located within 70 highway miles of at least one other subsidized community. If subsidized service to each of these communities were regionalized, 10 regional airports could serve those 21 communities. The figure on slide 25 illustrates the locations of the communities that are within 70 highway miles of each other.

Potential Positive and Negative Effects

Regionalizing service to some communities could generate federal savings. However, those savings may be marginal, because the total costs to serve a single regional airport may be only slightly less than the cost to serve two or three neighboring airports. For example, DOT provides $1.9 million in annual subsidies to Air Midwest, Inc., to serve Watertown, New York, with stops at two other EAS-subsidized communities--Ogdensburg and Massena, New York—before arriving at its final destination, Pittsburgh, Pennsylvania. According to an official with Air Midwest, the marginal cost of operating the flight segments to Massena and Ogdensburg are small in relation to the cost of operating the flight from Pittsburgh to Watertown. Another potential positive effect is that passenger levels at the proposed regional airports could grow because the airline(s) would be drawing from a larger geographic area, which could prompt the airline(s) to provide better service (i.e., larger aircraft or more frequent departures). There are also a number of disadvantages to implementing this option. First, local passengers would be inconvenienced since they would likely have to drive longer distances to obtain local air service. Moreover, the passenger response to regionalizing local air service is unknown. For example, city officials at Watertown reported that they believed no one would drive 60 miles north to Ogdensburg to fly with an EAS carrier because Syracuse is roughly the same distance to the south and offers better fares and service. Additionally, as with other options, the potential impact on the economy of the affected communities is unknown. Regionalizing air service has sometimes proven controversial at the local level, in part because regionalizing air service would require some communities to give up their own local service for the hypothetical benefits of a less convenient regional facility. Even in situations where one airport is larger and better equipped than others (e.g., where one airport has longer runways, a superior terminal facility, and better safety equipment on site), it is likely to be difficult for the other communities to recognize and accept the benefits of surrendering their local control and benefits.

Changing Carrier Subsidies into Local Grants

Local grants could enable communities to match their transportation needs with individually tailored transportation options to connect them to the national air service system. DOT has been pilot testing local transportation grants to communities.[21] Through this program, in July 2002, DOT awarded $20 million in grants to 40 small communities, including 5 EAS-subsidized communities, in part to test whether increased flight frequencies, capacity, and/or marketing at those communities could improve service and passenger ridership. For instance, DOT awarded $500,000 to Cape Girardeau, Missouri, to support the community's efforts to test the benefits of increased flight frequencies at the community airport. According to DOT, nearly all of the 40

[21] The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21), Public Law 106-181, established a pilot program designed to help smaller communities enhance their air service.

grants awarded involved additional financial contributions from the communities themselves, and a majority either has or will establish public/private partnerships to increase community participation in the proposed projects. Slide 26 lists a range of DOT AIR-21 pilot grants.

Potential Positive and Negative Effects

Local grants would enable communities to choose how to meet their transportation needs. Some of these choices may be less costly than the current federal subsidies paid to air carriers. In addition, depending on the option, passenger traffic could grow because, in theory, the community could choose the most appropriate way for people in that community to access the national air service system. There are also a number of disadvantages to implementing this option. First, to administer the local grants, an administrative mechanism would need to be created and funded. Second, the passenger response to any change in access to air service is unknown. In addition, depending on the option implemented, local passengers could be inconvenienced. The unknown passenger response, coupled with the possibility of additional passenger inconvenience, could potentially result in a greater passenger leakage. Additionally, the resulting impact on the economy of the affected communities is unknown.

Concluding Observations

The EAS program appears to be meeting its statutory objective—to ensure continued air service to small communities. However, information we developed indicates that relatively few people who travel to or from some of these communities use the federally-subsidized air service. Many travelers at some of these communities have alternatives to their local airports. Their decisions to use those alternatives—whether another, larger airport or simply the highway system--are economically and financially rational. Changing those individuals' behavior would likely require significant changes in the fares and service provided at small community airports. Increasing EAS-subsidized communities' stakes in their local service would seem to be beneficial. Yet decisions regarding fares and service are shaped by market forces and often made by corporations that are not party to EAS contractual agreements with DOT--major U.S. network airlines. As a result, we believe that the program's costs will rise in the short run (particularly as air carriers file notices to discontinue service at various communities), and that the number of passengers who use subsidized service will continue to be relatively small. To the extent that the program must operate within certain fiscal constraints, we identified some directions that the Congress may wish to consider to redefine the circumstances under which communities can receive subsidized air service, as it has done in the past, or to fundamentally change the form of the federal assistance provided to these communities for air service. Any changes to the program's structure or objective will affect each EAS-subsidized community differently, depending on such characteristics as its distance to alternate, larger airports. The Congress will need to weigh the effects of each option against the program's overall goal.

Scope and Methodology

To describe the current state of the EAS program and how it has changed since 1995, we analyzed information from DOT on air service levels (e.g., the number of communities served, passengers enplaned, and available seating capacity in each market), subsidy rates, and the EAS program's budget. To identify and describe major factors that may affect potential future subsidy requirements, we used quantitative and testimonial information from DOT, air carriers, and commercial aviation databases with which GAO has annual contracts (e.g., BACK Aviation Solutions). We conducted case studies at five EAS-subsidized communities in the continental

United States to illustrate these factors. Those communities were Beckley and Bluefield, West Virginia; Watertown, New York; Brookings, South Dakota; and Wolf Point, Montana. We selected those communities because they varied in passenger traffic, carrier subsidies, geographic locations, and other factors. To identify and evaluate options that might enhance the long-term viability of the EAS program and their potential related effects, we interviewed DOT officials and representatives from various industry groups, EAS communities, and major and regional air carriers, and analyzed information from those and other data sources. Because of time constraints, we did not analyze the reliability of DOT's passenger enplanement data or carriers' financial information.

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As arranged with your offices, we will provide copies to the Honorable Norman Mineta, Secretary of Transportation; air carriers that provide subsidized EAS operations; and other interested parties. We are sending copies of this report to interested congressional committees. We will also send copies to others upon request. In addition, the report will be available at no cost on the GAO Web site at http://www.gao.gov.

We provided a draft of this report to DOT for its review. DOT officials provided technical and clarifying comments, which we incorporated as appropriate. We conducted our review between March and August 2002 in accordance with generally accepted government auditing standards.

If you have any questions about this report, please contact me or Steve Martin at 202-512-2834. Key contributors to this assignment are listed in enclosure II.

JayEtta Z. Hecker
Director, Physical Infrastructure Issues

List of Congressional Committees

The Honorable Patty Murray
Chairman
The Honorable Richard Shelby
Ranking Minority Member
Subcommittee on Transportation
Committee on Appropriations
United States Senate

The Honorable Ernest F. Hollings
Chairman
The Honorable John McCain
Ranking Minority Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable John D. Rockefeller, IV
Chairman
The Honorable Kay Bailey Hutchinson
Ranking Minority Member
Subcommittee on Aviation
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Harold Rogers
Chairman
The Honorable Martin Olav Sabo
Ranking Minority Member
Subcommittee on Transportation
Committee on Appropriations
House of Representatives

The Honorable Don Young
Chairman
The Honorable James Oberstar
Ranking Minority Member
Committee on Transportation and Infrastructure
House of Representatives

The Honorable John L. Mica
Chairman
The Honorable William O. Lipinski
Ranking Democratic Member
Subcommittee on Aviation
Committee on Transportation and Infrastructure
House of Representatives

Commercial Aviation

Options to Enhance the Long-term Viability of the Essential Air Service (EAS) Program

Briefings to Congressional Committees, August 22-29, 2002

1

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Overview

- Objectives
- Results in brief
- Background
- Review results
- Summary
- Scope and methodology

2

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Objectives

- What is the status of the EAS program, and how has it changed since 1995?
- What major factors may affect potential future subsidy requirements?
- What are some options that might enhance the long-term viability of the EAS program and their potential effects?

3

Results in Brief

- As of July 1, 2002, the EAS program subsidized air service to 79 communities in the continental U.S. and 35 in Alaska, Hawaii, and Puerto Rico—a net increase of 4 since 1995 for the continental U.S. DOT was incurring subsidy liabilities to carriers serving another twelve communities. Total FY 2002 awards may approach $97 million.*
- Several factors–including increasing carrier costs, limited passenger revenue, and increasing numbers of eligible communities requiring subsidized service—are likely to affect future subsidy requirements.
- We identified four options to enhance the long-term viability of the EAS program. Potential effects of these options include decreasing federal costs, increasing passenger traffic, and creating community choice on transportation options. Potential negative effects also exist, such as increased passenger inconvenience.

*All dollar figures are expressed in constant 2002 dollars.

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Background: EAS Program Goals

- When Congress deregulated the airline industry in 1978, it was concerned that small communities might lose access to the national air service system. Therefore, it provided for a continuation of air transportation to all cities with air service provided by a certificated carrier as of October 24, 1978.
- Congress established the EAS program to carry out this mandate by providing direct subsidies to air carriers to serve eligible small communities they would not serve without being subsidized. The Department of Transportation (DOT) administers the EAS program.

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Background: Small Communities' Air Service and Economic Activity

Community type	Number of communities	Average county: Population	Average county: Employment	Average county: Income per capita	Average county: Manufacturing earnings	Typical number of: Carriers serving community	Typical number of: Daily departures
EAS-subsidized communities (continental U.S.)	79	52,352	29,638	$21,997	$127,943	1	3
Nonsubsidized small communities* (continental U.S.)	202	126,813	77,558	$25,147	$344,579	2	6

*Nonsubsidized small communities are those served by airports that are defined as "nonhubs" by statute (49 USC 41731). (See GAO-02-432 for more Information on air service to small communities.)
Source: GAO analysis of 1999 economic data from the Bureau of Economic Analysis and airline schedule data from the Kiehl Hendrickson Group, as of October 2001. Number of EAS communities is as of July 1, 2002.

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Background: EAS Program Service and Eligibility Criteria

Communities would be eligible for subsidized air service under three general conditions:

- Received service in October 1978
- Are located more than 70 highway miles from the nearest medium or large hub
- Require a subsidy of less than $200 per passenger (except for communities more than 210 miles away from a medium or large hub)

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Background: EAS Program Service and Eligibility Criteria (Cont'd)

Current law requires that essential air service generally include:

- Service to a medium or large hub airport with not more than one intermediate stop*
- Service with aircraft having at least 15 passenger seats (e.g., Beech 1900, Embraer 110, Jetstream 31)
- Two daily round trips
- Service with pressurized aircraft for flights over 8000 feet
- Flights at "reasonable" times at prices that are "not excessive" compared to generally prevailing prices
- Service to Alaskan communities subject to different requirements

*A large hub enplanes at least 1 percent of all U.S. passengers, a medium hub 0.25 to 0.99 percent.

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Background: Subsidy Calculation

Projected operating expenses

(Direct and indirect expenses: e.g., fuel and oil, maintenance, insurance, salaries, leasing)

−

Projected operating revenues

(e.g., passenger revenue, freight revenue)

+

Profit element

(5% of operating expenses)

=

Carrier subsidy

Note: Air carriers provide the data for the subsidy calculations. DOT officials state that they confirm reasonableness of information submitted.

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What Is the Status of the EAS Program and How Has It Changed Since 1995?

- As of July 1, 2002, the EAS program subsidized air service to 79 communities in the continental U.S. and 35 in Alaska, Hawaii, and Puerto Rico—a net increase of 4 since 1995 for the continental U.S. DOT was incurring subsidy liabilities for carriers serving another 12 communities.
- Five regional carriers serve the majority of the EAS markets in the continental U.S.
- Since 1995, the budget authority for the EAS program has increased from $37 million to $113 million. Since 1995, the average subsidy per continental U.S. community has increased from $424,000 to $828,000. Total FY 2002 awards may approach $97 million.

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EAS Program Status (as of July 1, 2002)

- 114 subsidized communities (Tentative additional communities*: 12)
- Total annual subsidies awarded: $74.2 million** (Tentative additional subsidies: $11.6 million)
- Estimated average annual subsidy per community: $828,000 (continental U.S.), $251,000 (AK, HI, PR)
- EAS carriers: 13 (continental U.S.), 14 (AK, HI, PR)
- Most common aircraft type: 19-seat Beech 1900 (continental U.S.) and 4-9 seat Cessna (AK, HI, PR)

*New communities defined as subsidy eligible by statute where carriers have filed notice to discontinue unsubsidized service.
** Fourteen of the 114 subsidized communities are under rate negotiation with DOT. The estimated additional annual subsidies to be awarded to carriers serving the 14 communities is $5.1 million. DOT expects to award an additional $6.5 million in retroactive subsidies under DOT Order 2002-2-13.

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Top Five EAS Carriers (as of July 1, 2002)

Carrier	2001-2002 subsidies (millions)	Percentage of EAS subsidy awards in the continental U.S.	Number of EAS communities served	Average subsidy per community	Projected 2002 passengers	Projected Percentage of EAS passengers in the continental U.S.	Projected Average subsidy per passenger
Great Lakes	$22.4	34.2%	29	$770,904	258,000	35%	$87
Big Sky	$13.2	20.5%	15	$880,883	79,000	11%	$167
Colgan	$8.4	12.8%	7	$1,195,946	98,000	13%	$85
Mesa	$6.2	9.6%	9	$693,737	65,000	9%	$95
Corporate	$5.5	8.5%	7	$785,855	79,000	11%	$70
Subtotal	$55.7	85.6%	67		579,000	79%	

Source: GAO analysis of data from DOT.

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EAS Service Changes (as of July 1, 2002)

	1995	1999	2002 (estimated)	Percentage total change
Service elements - continental U.S.				
Number of subsidized communities	75	68	79	5.3%
Median daily passengers enplaned per community	11	8	10*	-9.1%
Average subsidy per community	$423,803	$668,448	$828,474	95.5%
Average subsidy per passenger	$79	$133	$229*	189.9%
Service elements - Alaska, Hawaii, Puerto Rico				
Number of subsidized communities	31	28	35	12.9%
Median daily passengers enplaned per community	2	2	1*	-50.0%
Average subsidy per community	$90,403	$97,966	$251,219	177.9%
Average subsidy per passenger	$13	$42	$99*	661.5%

*Passenger estimates for 2002 are based on passenger enplanements for 2000.
Source: GAO analysis of data from DOT and FAA.

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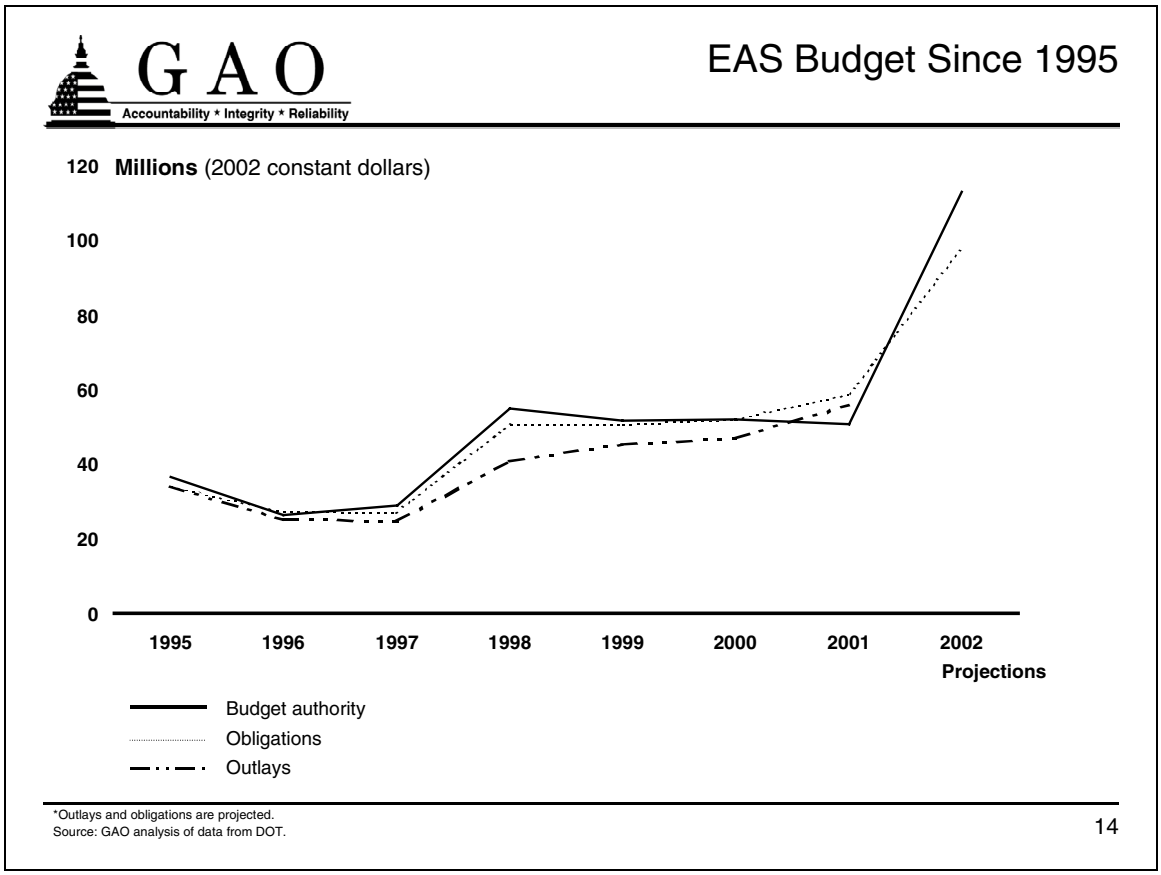
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EAS Budget Since 1995
120
Millions (2002 constant dollars)
100
80
60
40
20
0
1995
1996
1997
1998
1999
2000
2001
2002
Projections
Budget authority
Obligations
Outlays
*Outlays and obligations are projected.
Source: GAO analysis of data from DOT.
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What Major Factors May Affect Potential Future Subsidy Requirements?

- Increased aircraft operating costs
- Limited revenue caused by EAS carriers' limited ability to capture local passenger traffic:
    - Passengers may choose to travel from larger airports.
    - Passengers may choose other transportation modes.
- Additional eligible communities may require subsidized service.

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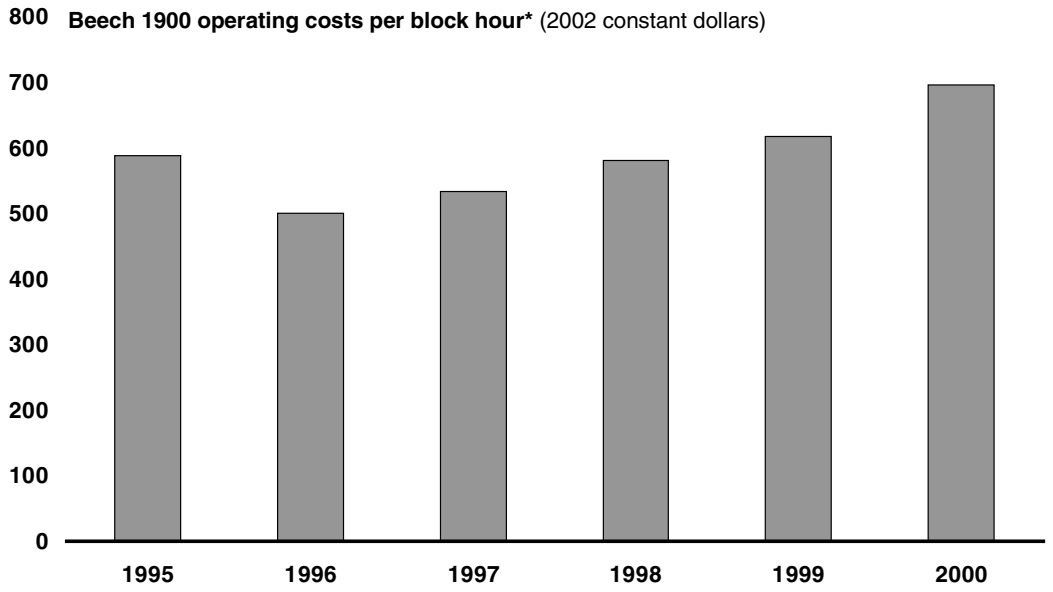
Increased Carrier Costs



*Block hours are a common measure of aircraft usage. A block hour begins when the aircraft backs away from the gate and ends when the aircraft pulls into the gate at the destination.
Source: GAO analysis of selected air carrier data from DOT.

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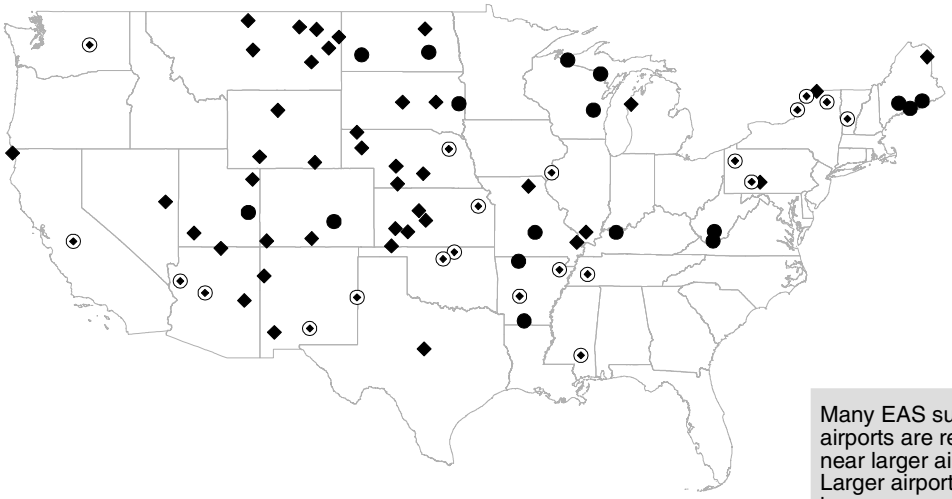
Limited Revenue: Passengers May Choose Larger Airports



EAS and Air Alternatives

- ● Within 125 driving miles of all hubs or nonhub
- ⊙ Within 125 driving miles of low-fare service and all hubs or nonhub
- ◆ Further than 125 driving miles from low-fare service and all hubs or nonhub

Many EAS subsidized airports are relatively near larger airports. Larger airports may have more carriers and therefore more competition, which can result in lower fares.

Source: GAO analysis.

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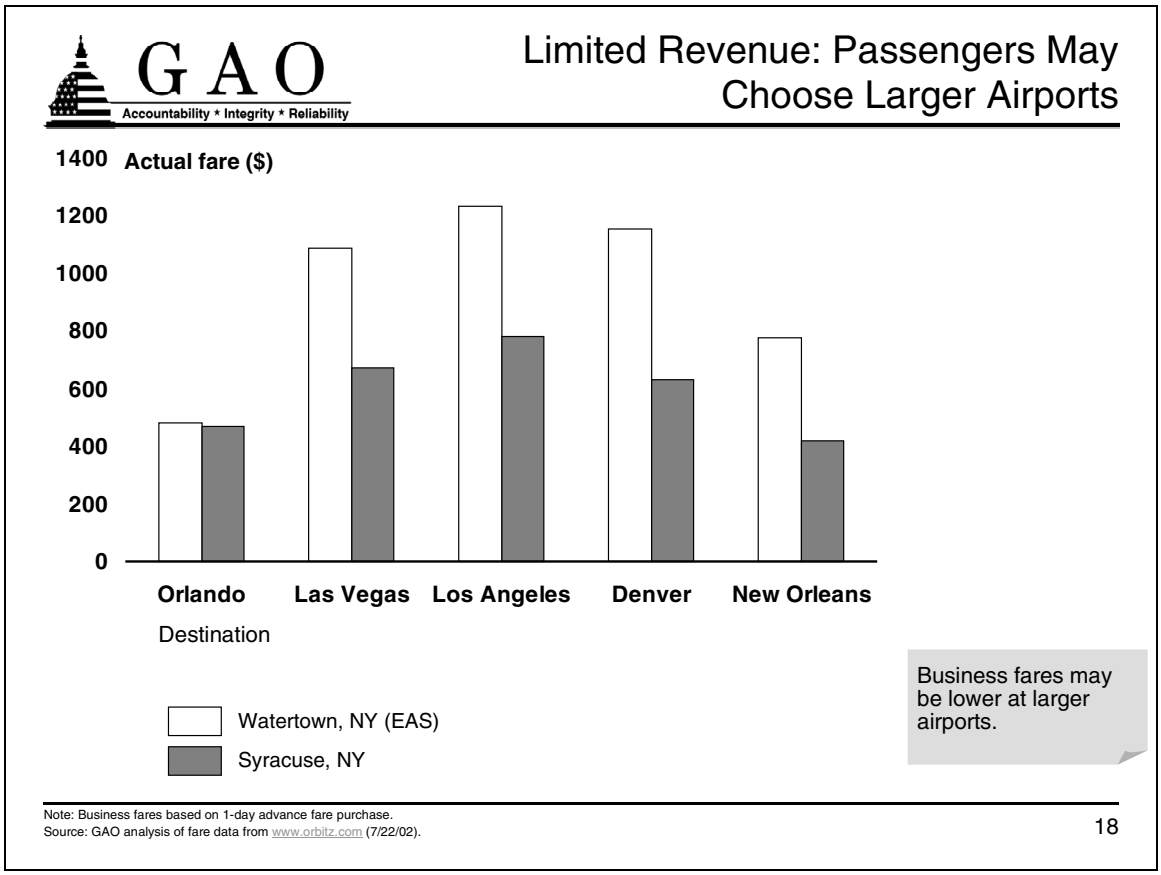
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Limited Revenue: Passengers May Choose Larger Airports
Actual fare ($)
1400
1200
1000
800
600
400
200
0
Orlando
Las Vegas
Los Angeles
Denver
New Orleans
Destination
Watertown, NY (EAS)
Syracuse, NY
Business fares may be lower at larger airports.
Note: Business fares based on 1-day advance fare purchase.
Source: GAO analysis of fare data from www.orbitz.com (7/22/02).
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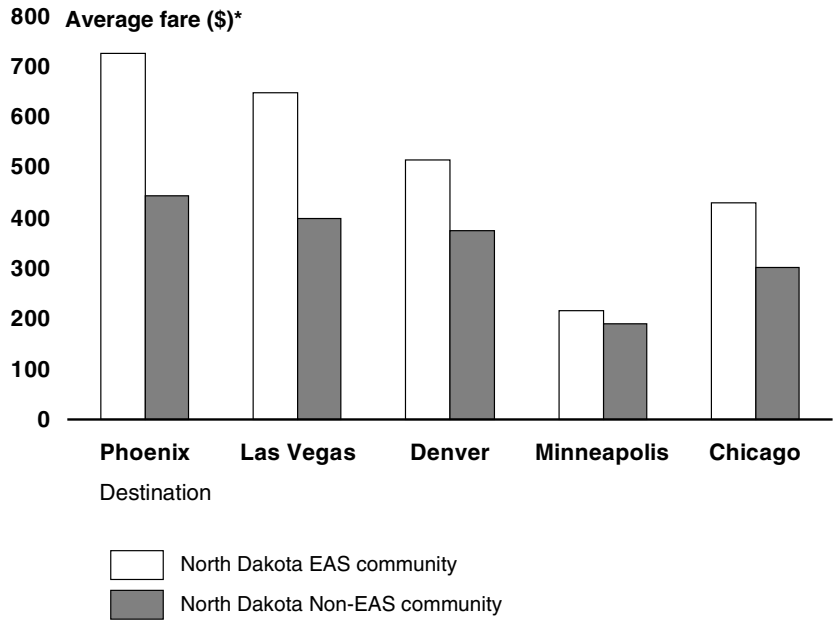
Limited Revenue: Passengers May Choose Larger Airports (Cont'd)



Leisure fares may be lower at larger airports.

*Average leisure fares from two North Dakota EAS airports compared to fares available at Bismarck or Grand Forks, ND.
Source: GAO analysis of data from the North Dakota Aeronautics Commission as of June 11, 2002.

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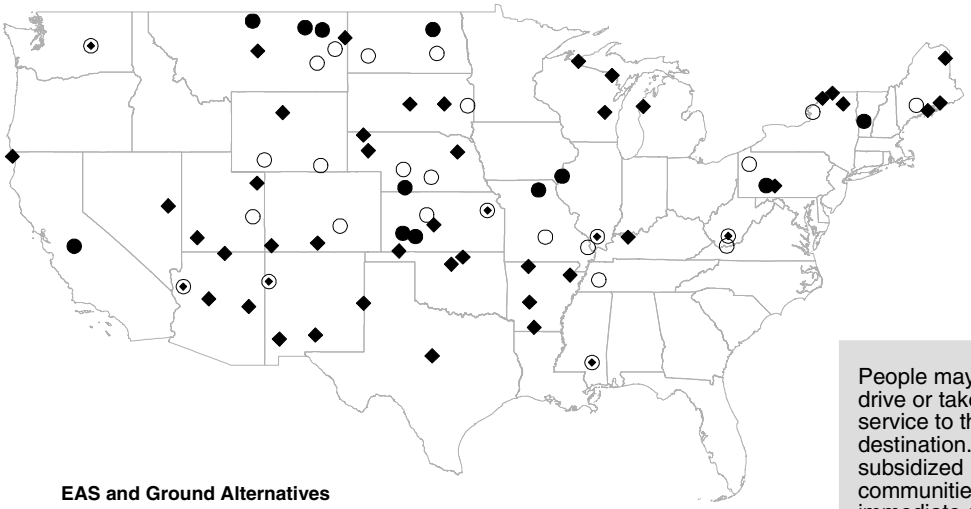
Limited Revenue: Passengers May Choose Other Transportation Modes



EAS and Ground Alternatives

- ● Within 20 driving miles of Amtrak
- ○ Within 20 driving miles of interstate
- ⊙ Within 20 driving miles of both
- ◆ Further than 20 driving miles from both

People may choose to drive or take rail service to their final destination. 42 EAS subsidized communities have immediate access to Amtrak, interstate highways, or both.

Source: GAO analysis.

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Additional Eligible Communities May Require Subsidized Service

- Since September 11, 2001, carriers at 15 additional eligible communities filed notice to discontinue unsubsidized service. Projected subsidies required: $14.5 million.*
- Additional eligible communities may require subsidies in the future. Of the 98 small communities with air service from only one carrier:**
    - 25 have smaller populations and lower levels of employment than the average EAS-subsidized community.
    - 21 have lower levels of income per capita than the average EAS-subsidized community.
    - 35 have lower levels of manufacturing earnings than the average EAS-subsidized community.

*Projected subsidies are the average subsidy per community (based on most current orders) multiplied by the number of additional subsidy-eligible communities post-September 2001 or DOT estimates.
**Data is as of October 2001. See GAO-02-432.
Source: GAO analysis of data from the Geospatial and Statistical Data Center.

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What Are Some Options That Might Enhance the Long-term Viability of the EAS Program and Their Potential Related Effects?

- Target subsidized service to more remote communities
- Better match capacity with community use
- Consolidate service to multiple communities into regional airports
- Change carrier subsidies into local grants
- Summary: each option potentially would have different effects.

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Option: Target Subsidized Service to Remote Communities

Cumulative outcomes

Mileage	EAS communities no longer meeting eligibility criteria (continental U.S.)	Passengers (estimated CY 2000)	Current annual EAS subsidy
<70 driving miles**	13	67,669	$11,815,476
<100 driving miles	25	125,967	$22,685,589
<125 driving miles	44	229,277	$36,596,430
<150 driving miles	55	280,539	$45,795,085

Increase the highway distance criteria for eligibility to focus on the most remote communities and expand the qualifying nearby airports to include small hubs and non-hubs with jet service from two or more competing carriers.*

Note: A small hub enplanes 0.05 to 0.249 percent of all U.S. passengers, and a nonhub less than 0.05 percent.
*Service data for nonhubs is from Kiehl-Hendrickson schedule data (October 2001).
** Only small and nonhubs with jet service from two or more carriers are included in analysis.
Source: GAO analysis of data from DOT.

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Option: Better Match Capacity with Community Use

- Encourage communities to seek a waiver from the Secretary of Transportation of the requirement that service must be provided with aircraft carrying at least 15 seats. Alamogordo, NM, example:

Carrier	Mesa (2000-2002 data)	Rio Grande (projected data)	Percentage change
Aircraft type (available seats)	Beech 1900 (19 seats)	Cessna Caravan (9 seats)	-36.8%*
Daily flights	3	4	33.3%
Subsidy	$923,789	$849,235	-8.1%

- Reduce unused capacity at communities where carriers have added daily flight frequencies. Since 1995, carriers added flight frequencies at 24 communities in the continental U.S., and passenger traffic dropped at 9.

*Change in the total seats per day.
Source: GAO analysis of data from DOT.

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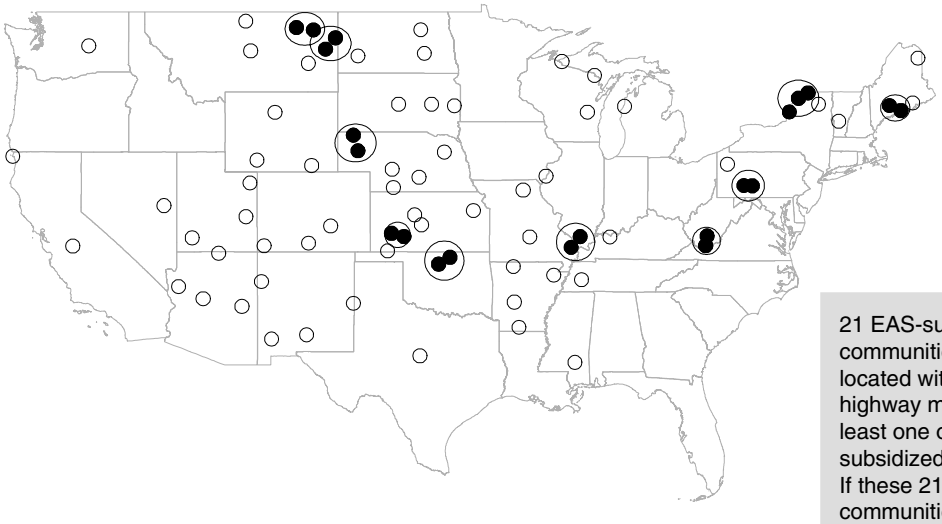
Option: Consolidate Service to Multiple Communities into Regional Airports



● EAS airports within 70 driving miles
○ All others

21 EAS-subsidized communities are located within 70 highway miles of at least one other EAS-subsidized community. If these 21 communities were consolidated, the result would be10 regional EAS-subsidized airports.

Source: GAO analysis.

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Option: Change Carrier Subsidies into Local Grants

Local grants could allow small communities to choose a variety of ways to meet local transportation needs.

Selected DOT AIR-21 pilot grants:

- Moab, UT, community-based marketing ($250,000)
- Cape Girardeau, MO, increased frequencies ($500,000)
- Mason City, IA, revenue guarantee ($600,000)
- Casper/Gillette, WY, aircraft purchase ($500,000)
- Baker City, OR, Sky Taxi charter service ($300,000)
- Scottsbluff, NE, start-up commuter carrier ($950,000)
- Binghamton, NY, equipment upgrade to regional jet ($500,000)
- Meridian, MS, increased flight frequency and hub access ($500,000)
- Hailey, ID, air carrier revenue guarantees ($600,000)
- Reading, PA, airport shuttle service ($470,000)

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Summary: Potential Effects

	Less cost	Community choice	Increased passenger traffic	Increased passenger leakage	Unknown economic impact on community	Unknown passenger acceptance	Increased passenger inconvenience	Admin. Structure needed
Target remote communities	●				●		●	
Better match capacity with use	●			●	●	●	●	
Consolidate to regional airports	●		●	●	●	●	●	
Local grants	●	●	●	●	●	●	●	●

Note: The above table does not include all potential effects for each option listed. In addition, the net effect of each option above is indeterminable.
Source: GAO analysis

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Scope and Methodology

- To describe the current status of the EAS program budget and service, and how it has changed over time, GAO used quantitative and testimonial information from DOT, air carriers, and commercial aviation databases with which GAO has annual contracts.
- To identify and describe the factors that may affect future subsidy requirements, GAO used quantitative and testimonial information from DOT, air carriers, and commercial aviation databases with which GAO has annual contracts. To illustrate the factors, we conducted case studies at five EAS-subsidized communities in the continental U.S., chosen by variation in passenger traffic, subsidy amounts, and geographic location.

We conducted our work between March and August 2002 in accordance with generally accepted government auditing standards.

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Scope and Methodology (Cont'd)

- To identify and evaluate options to enhance the long-term viability of the EAS program, including ways to decrease carrier costs and increase passenger demand, and their potential effects, we analyzed cost and revenue data from DOT and air carriers, and interviewed DOT officials and representatives from various industry groups, EAS communities, and major and regional air carriers.

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GAO Contacts and Staff Acknowledgments

GAO Contacts

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Acknowledgments

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