

CHAPTER 2: WHAT CHANGES ARE EXPECTED IN THE U.S. AIRLINE INDUSTRY?

Why are Trends in the US Airline Industry Important to Washington State?

Understanding changes impacting the U.S. airline industry may allow the state to anticipate future changes in the airline services at Washington airports

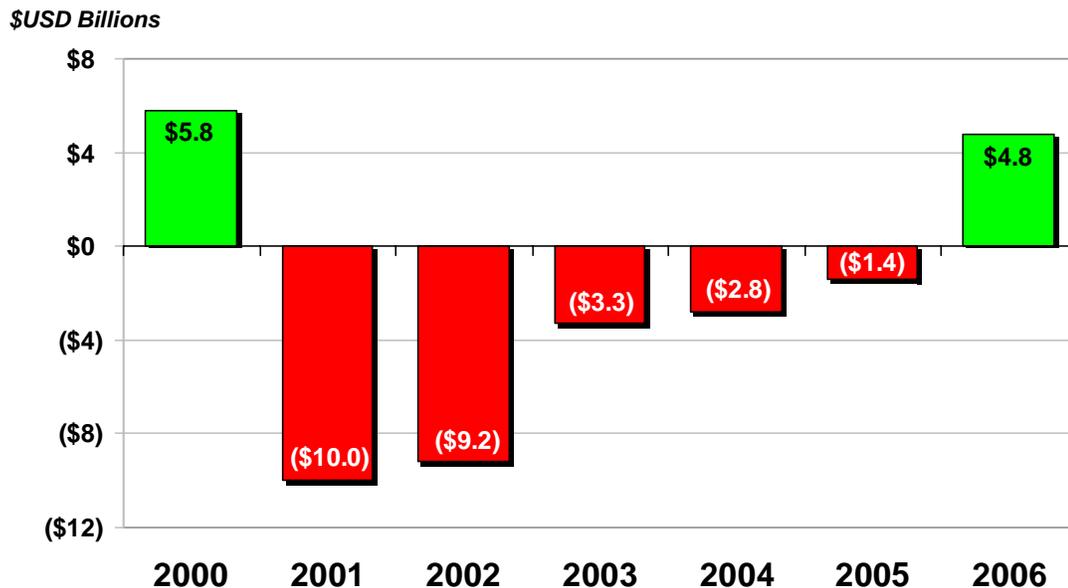
In many instances, commercial service trends occurring at Washington's airports are reflective of industry-wide developments affecting air service patterns across the county. Therefore, it is useful to put statewide trends into a national context. Since 2000, the U.S. airline industry has experienced extreme volatility resulting from factors including dramatic changes in airport security, record high fuel prices, increased competition by low cost carriers, massive financial losses, and operational and organizational restructuring in the attempt to restore profitability. An understanding of changes that have impacted the national airline industry can help to explain recent developments in airline services at the state's commercial airports. It will also allow the state to anticipate changes that may affect the future pattern of airline services at Washington airports.

What is the Recent State of the US Airline Industry?

Financial Performance

U.S. airlines suffered unprecedented financial losses from 2001 through 2005. The major U.S. passenger airlines (those carriers with greater than \$1 billion in annual operating revenue) incurred \$27 billion in cumulative operating losses over the five-year period and have undergone a process of extensive financial and operational restructuring in an effort to restore profitability and achieve long-term viability. U.S. airlines only recently returned to profitability in 2006. Last year U.S. major airlines achieved an operating profit of \$4.8 billion.

**Figure 9: U.S. Major Airlines /1 Operating Profit
2000 to 2006**



1/ Includes all U.S. airlines with greater than \$1.0 Billion in annual revenue.

Source: US DOT, Form 41, Database Products, Inc.

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It is noteworthy that June 2007 was the first month in more than five years that one or more of the U.S. major airlines was not in bankruptcy.

A series of factors contributed to the recent financial turmoil facing the U.S. airlines. The economic downturn that began in 2000 and the immediate and dramatic consequences of the terrorist attacks of September 11, 2001 caused a substantial and immediate reduction in the underlying demand for passenger air travel. While demand levels as measured by enplaned passengers and revenue passenger miles (RPMs) have recovered to their pre-9/11 levels, industry fares, airline yields and overall revenues have remained depressed.

Impacts of Increased Airport Security

Although the initial impacts of 9/11 on air travel demand have dissipated, the escalation in airport security and passenger screening processes has produced fundamental changes in passenger travel patterns. Additional airport security has increased the passenger time associated with air travel, while reducing its ease and convenience. As a result, since 2001 there has been a significant decline in short-haul air trips, where the increased travel time requirement represents a large percentage of the overall trip and where ground transportation can most easily be substituted.

Also, the aftermath of 9/11 encouraged many businesses to explore alternatives to air transportation including web and video-teleconferencing. Since air fares and airline yields for business travelers have historically far exceeded those for leisure passengers, the disproportionate decline in business travel has caused airline revenues to fall.

Furthermore, the increase in airport security has been accompanied by a steep increase in security related costs, with a portion of these costs imbedded in ticket prices but not captured by the airlines. As a result, the airlines' share of overall air travel expenditures has declined.

Rapid Escalation in Fuel Costs

The cost of jet fuel has risen from \$0.84 to \$1.93 since 2003

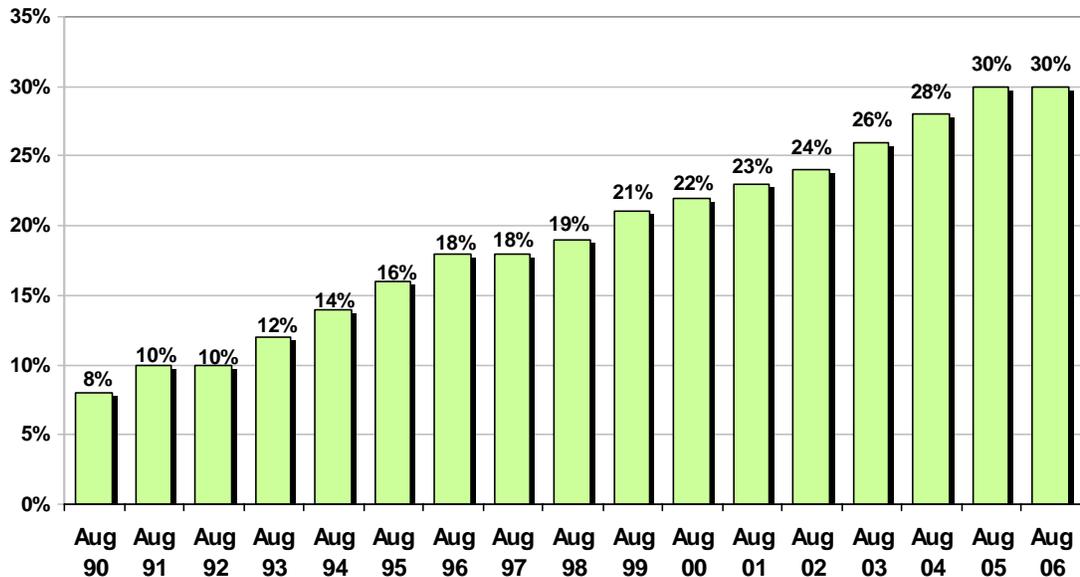
The financial condition of the U.S. airlines has also been stressed by the rapid rise in fuel prices that has occurred over the past four years. The average jet fuel price per gallon for U.S. airlines has risen from \$0.84 in 2003 to \$1.93 in 2006. Fuel costs in 2006 represented 32 percent of U.S. airline passenger revenues, compared to just 13.5 percent in 2003. While the airline industry has been able to pass through a portion of these additional costs in the form of fare increases, Southwest Airlines' aggressive fuel hedging program constrained ticket prices in markets where it provided direct or indirect competition through much of this period.²

Growth by Low Cost Carriers

On another front, the U.S. aviation market has seen strong growth in the presence of low cost airlines including Southwest, jetBlue, AirTran, Frontier and others. The share of domestic seat capacity operated by low cost carriers has risen from 16 percent to 30 percent since 1995 (Figure 10). As these low cost carriers have added aircraft and expanded their route networks, a growing portion of the overall U.S. domestic air travel market has become subject to low fare competition. In general, pricing in the airline industry is directly related to competition and most specifically, competition from low cost carriers. The growth in low cost airlines has caused downward pressure on ticket prices, and caused air fares and yields to fall.

² The impacts of Southwest's fuel hedging program are dissipating, as its fuel hedges now account for a smaller proportion of its total fuel consumption, and at higher per gallon prices than in previous years.

Figure 10: U.S. Low-Fare Carrier Share of Total Domestic Nonstop Seats 1990–2006



Source: Official Airline Guide

These pressures will continue, as low cost carriers continue to expand their aircraft fleet and overall presence in the U.S. market. In fact, while the legacy airlines have been reducing domestic seat capacity, low cost airlines continue to expand their aircraft fleets. For example, low cost carriers will receive 80 percent of the total aircraft deliveries to U.S. mainline jet carriers in 2007.

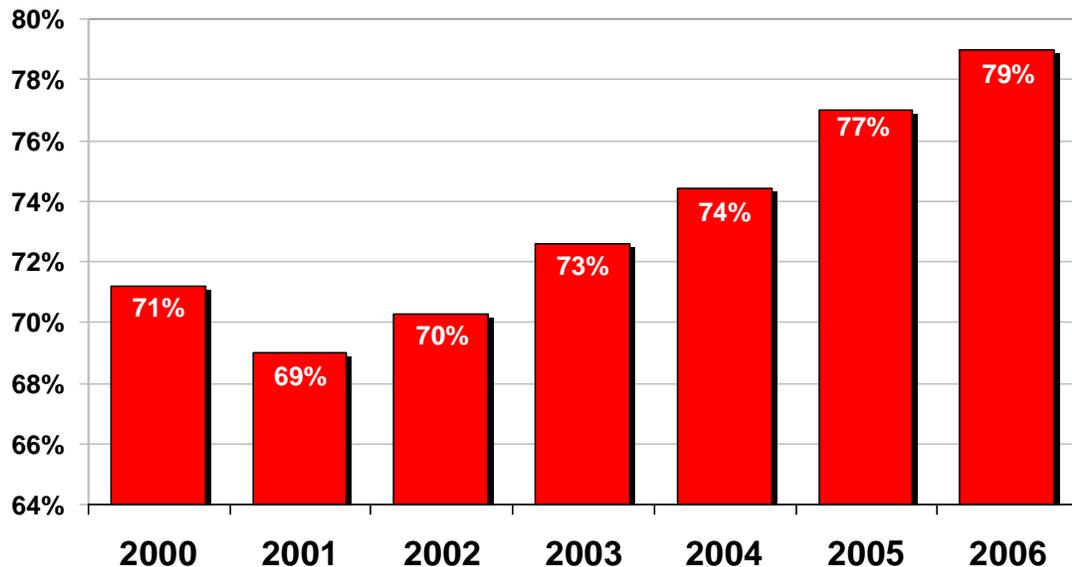
Carrier Strategy for Recovery

The network carriers—generally defined through their hub-oriented route networks—responded to their financial distress and growing domestic competition by:

- Reducing domestic capacity, refocusing activity on their primary hub markets.
- Increasing their reliance on regional airline affiliates.
- Aggressively restructuring costs including labor, pensions, and aircraft lease rates, either inside or outside of bankruptcy court.

Capacity reductions have led to a significant rise in domestic load factors (i.e., the percent of seats occupied by passengers), as illustrated in Figure 11.

Figure 11: Average Domestic Passenger Load Factors for U.S. Airlines



Source: Air Transport Association

While some industry observers have predicted the demise of the legacy carriers³, these airlines still maintain a revenue advantage over low cost competitors. This is due to their network structure, ability to participate in a greater number of city-pair markets, frequent flyer programs, a dominant presence in U.S.-international markets, and ability to access worldwide markets through international alliances. Their survival has certainly been aided by the continued willingness of investors and stakeholders to provide new capital despite the industry's exceptionally poor financial performance.

The recent wave of bankruptcy and network restructuring has led several legacy carriers to renew their focus on international markets. However, nearly all of the long-haul international routes targeted for new service by U.S. airlines involve their primary U.S. hub cities and second tier cities outside the U.S.

New Entrant Airlines

On the domestic front, two new and well-financed airlines—Virgin America and Skybus—received operating certificates from the U.S. Department of Transportation and have or will begin service in 2007. Skybus currently operates a route network centered on its Columbus, Ohio base and has adopted a strategy of serving major U.S. metropolitan areas

³ Legacy carriers include airlines such as American, Delta, Northwest, United, and Continental that are generally characterized by their long history and hub-oriented route networks.

through secondary, surrounding airports. For example, Skybus has elected to serve the greater Seattle region through Bellingham, and serves Boston through Portsmouth, New Hampshire. Virgin America, which obtained its operating certificate after a protracted administrative process, is based at San Francisco and is expected to offer service to the largest U.S. markets with a long-haul, transcontinental focus.

Skybus has elected to serve the Seattle region through Bellingham

New entrant airlines have also recently emerged in the U.S.-Transatlantic market including Maxjet and Eos. Both of these carriers are targeting the highest density city-pairs (e.g., New York-London) and each is providing premium services at price levels below prevailing rates for first and business class travel. Low cost carriers have yet to develop a meaningful presence in U.S. international markets, and the possibility of linking international services to the domestic route networks of the primary U.S. low cost carriers has not been realized.

New International Aircraft

In terms of international aircraft developments, the Airbus 380 and the Boeing 787 Dreamliner represent opposite ends of the spectrum. The high capacity (600 seats and above) Airbus aircraft is designed to serve the highest density city pair markets, offering carriers unit cost advantages and the ability to increase capacity and passenger throughput at slot constrained airports.

In contrast, the Boeing 787 is a long-range aircraft with capacity in the 225 seat range. This aircraft will enable airlines to offer nonstop service in international markets where passenger volumes are too low to support flights with larger widebody aircraft. The 787 may be ideally suited for future long haul international service from Seattle to major gateways in Europe and Asia.

Changes in the Aircraft Fleet Operated by U.S. Regional Airlines

Regional airlines that operate aircraft with fewer than 60 seats provide the bulk of services to smaller communities in the national commercial air transportation system. For many years, regional carriers have operated with code-sharing affiliations with major U.S. airlines. In these agreements, regional airline services link smaller air service markets into carrier hubs, where passengers can connect to mainline jet services to their final destination. The regional carrier industry historically operated turboprop aircraft in the 19 to 50-seat range, but in the early 1990's, the industry began introducing regional jet (RJ) aircraft with 30 to 50 seats into their fleets.

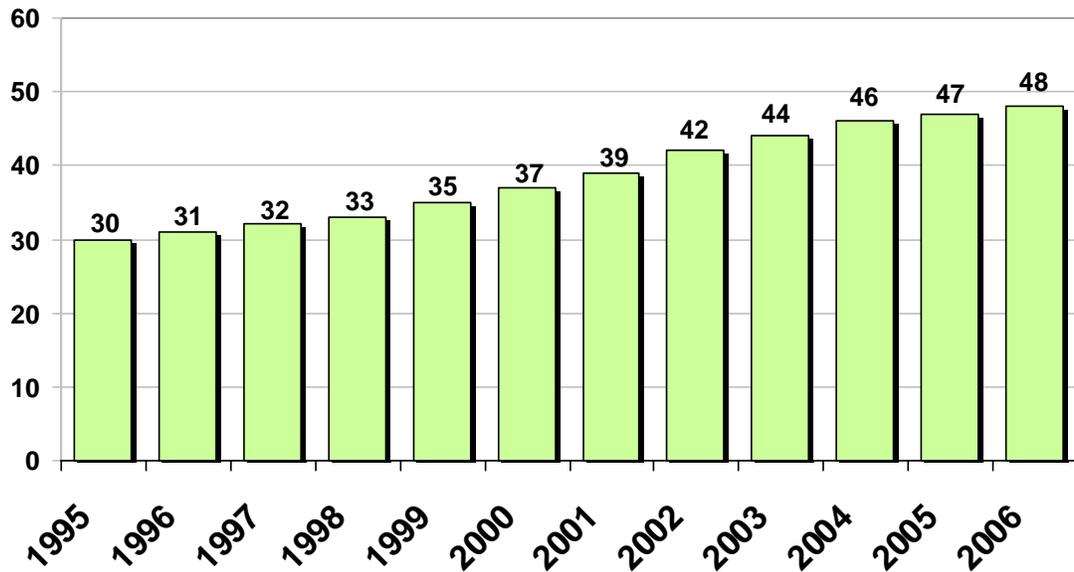
Since 1995, the average seat size of regional carrier aircraft has increased by 60%

While regional jets accounted for only 3 percent of regional airline departures in 1995, that share has steadily increased and RJ's represented nearly 80 percent of total regional carrier flights in 2006. Concurrently, turboprop aircraft with 19 seats or fewer accounted for more than 40 percent of regional airline departures in 1995, but now represent only 5 percent of total flights. Regional jets have been deployed not only in former turboprop markets, but also in:

- City-pairs that traditionally have been served by larger, mainline jets.
- New nonstop markets where the RJ's seat capacity and mileage range permit services that were not feasible in either larger mainline jets or with range-limited turboprop aircraft.

These trends have resulted in a significant increase in the average aircraft size operated by U.S. regional airlines. Between 1995 and 2006, the average seats per regional carrier departure has risen from 30 to 48 seats, an increase of 60 percent.

**Figure 12: Average Aircraft Seat Size for U.S. Regional Airlines
August 1995 - August 2006**



Source: OAG Schedule Tapes

This increase in regional carrier aircraft size has had mixed implications for communities that rely on regional airlines for access to the national air transportation system. Since passengers generally prefer to fly on larger aircraft, the upgauging of aircraft size has had some positive benefits in terms of passenger acceptance and comfort. However, the use of larger capacity aircraft is typically associated with a reduction in flight frequency. At smaller communities with limited passenger demand, the

substitution of larger aircraft can reduce flight frequency to a minimum level and have a negative impact on travel time options and connecting opportunities at the hub airport. When this occurs, passenger demand levels may be further reduced, as passengers choose to drive to larger surrounding airports to originate trips.

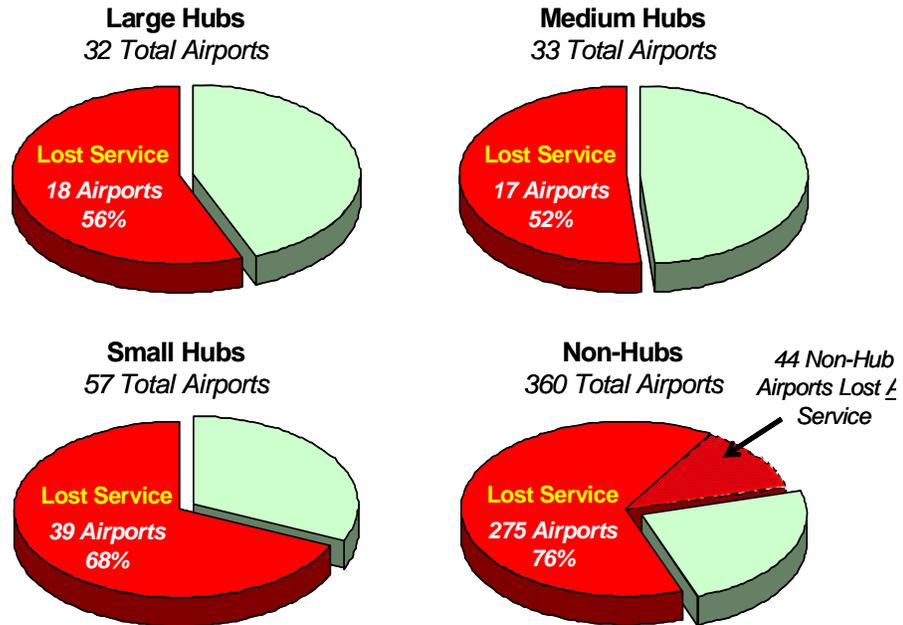
Changes in Service Levels at U.S. Airports

Reductions in domestic capacity, which has enabled U.S. airlines to improve financial performance, have been felt at airports across the country. Overall, domestic airline capacity has declined by approximately 9.5 percent from 2000 levels. The impacts of capacity reductions have been felt unevenly by airports in different size categories.

The FAA groups U.S. airports into four hub classes—Large Hubs, Medium Hubs, Small Hubs and Non-Hubs—based on their level of passenger enplanements.⁴ Overall, 18 of 32, or 56 percent of Large Hub U.S. airports experienced a drop in airline seat capacity between CY 2000 and 2007. For the 33 Medium Hubs, 52 percent lost seat capacity over this period. The proportion of airports experiencing service declines was greater in the Small Hub and Non-Hub categories, where 68 percent and 76 percent of airports lost service, respectively. Among the 360 Non-Hub airports, 44 have lost all scheduled airline service.

⁴ Airports classified as Large Hubs enplane at least 1 percent of total U.S. passengers; Medium Hubs enplane 0.25% to 1% of total U.S. passenger enplanements; Small Hubs enplane between 0.05% and 0.25% of total passengers; and Non-Hubs enplane less than 0.25% of total U.S. passengers.

Figure 13: Lost Service by Airport Hub Type, 2000 vs. 2007



Source: Official Airline Guide (OAG) Schedules, February 2000 and 2007

Figure 14 shows the changes in scheduled airline seat capacity that occurred at Washington airports over the past seven years. The capacity reductions at Sea-Tac and Spokane are slightly greater, but generally consistent with overall industry changes for airports in their size categories. Washington's six non-hub airports experienced an aggregate capacity decline of nearly 29 percent, 8 percentage points greater than the overall change at U.S. non-hubs. This occurred despite a significant capacity increase at Bellingham, where weekly seat capacity increased by 30 percent over the period. Yakima, Wenatchee, and Tri-Cities/Pasco experienced particularly steep declines, with weekly seat departures dropping by between 40 percent (Tri-Cities/Pasco) and 56 percent (Yakima).

**Figure 14: Change in Scheduled Airline Seat Capacity at Washington State Airports
February 2000 vs. February 2007**

Airport	Code	Hub Type	Weekly Seats		Capacity Change	Hub Class Average
			Feb 00	Feb 07		
Seattle/Tacoma	SEA	Large	391,993	350,394	-10.6%	-6.1%
Spokane	GEG	Small	45,100	39,156	-13.2%	-11.8%
Pasco	PSC	Non-Hub	9,725	5,844	-39.9%	-20.8%
Bellingham	BLI	Non-Hub	3,521	4,572	29.8%	-20.8%
Yakima	YKM	Non-Hub	3,547	1,554	-56.2%	-20.8%
Wenatchee	EAT	Non-Hub	2,035	1,036	-49.1%	-20.8%
Walla Walla	ALW	Non-Hub	1,221	873	-28.5%	-20.8%
Pullman/Moscow	PUW	Non-Hub	1,258	1,295	2.9%	-20.8%
Subtotal			21,307	15,174	-28.8%	-20.8%
Total State			458,400	404,724	-11.7%	-9.5%

Source: OAG Schedules

Why Are Small Communities Struggling to Maintain Airline Passenger Traffic and Services?

The economics that historically supported the provision of regional carrier feeder services from numerous small communities into major carrier hubs have been greatly stressed not only by the regional airline industry's transition to larger capacity aircraft, but also by fare competition at both the hub airport and, often, at surrounding in-state or out-of-state airports.

As low cost airlines have increased their competitive presence at nearly all major U.S. airports, local fares at hub airports have generally been reduced to levels that approach carrier costs. As a result, there is no longer the ability to price small community services through the hub airports at the same fare, or only slightly above the fare level paid by passengers originating trips from the hub city. Instead, the additional costs associated with the regional carrier feed service into the hub are now being fully reflected within the fare structure offered to small community passengers. In some cases, the fare premiums charged at smaller markets can significantly exceed the added cost of the feeder service, as these airports represent one of the few remaining markets sheltered from low fare competition. As a result, small airports across the country have experienced traffic losses, and some have lost all commercial services, as area passengers elect to drive greater distances to larger, surrounding

High fares and reduced flight frequencies are depressing passenger traffic at small communities

airports in order to avoid growing fare premiums. When low fare services are available at surrounding airports within driving distance of the community, the rate of diversion – also called *leakage* – can be magnified.

What Are the Implications for Commercial Air Service in Washington State?

As described in the Commercial Airport Forecasts chapter later in this report, Washington State's commercial airline traffic is highly concentrated at Seattle and Spokane, which together account for 96 percent of total statewide passenger traffic. Both of these airports exhibit a substantial base of local passenger demand, are served by multiple airlines, and have solid representation by low cost carriers and Alaska Airlines. While both airports experienced a decline in scheduled airline seat capacity between 2000 and 2007, the declines were generally consistent with those experienced by other airports of comparable size. At Sea-Tac, the emergence of the Boeing 787 aircraft, which offers long-range in a relatively small 225-seat capacity class may be perfectly suited to facilitate continued development of long-haul international services. For these reasons, both Seattle and Spokane are considered as stable markets that are well-positioned to experience future growth in airline services and passenger traffic.

The next tier of Washington commercial airports includes Tri-Cities/Pasco, Bellingham and Yakima. Tri-Cities/Pasco and Bellingham both enplaned well over 100,000 passengers in 2006, receive service by multiple carriers, and have service by one or more low cost carriers. Bellingham was recently selected by the new entrant carrier, Skybus, to serve the Seattle-Vancouver region into the airlines' Columbus, Ohio base. Both of these markets are well-established and expected to exhibit solid growth in passenger traffic in coming years.

Until recently, Yakima was served by a single airline—Horizon—with services feeding Alaska Airlines' hub at Sea-Tac. However, Yakima has successfully attracted a second carrier—SkyWest—to provide services to Delta Airlines' Salt Lake City hub. The addition of this second carrier will enhance competition and travel options for area passengers, and should secure Yakima's position as a solid and developing air travel market.

The remaining commercial service airports⁵ in Washington—Wenatchee, Walla Walla, and Pullman/Moscow—are the smallest commercial airline markets in the state. Each of these cities is dependent on a single carrier for all or nearly all of their scheduled airline services and each enplaned fewer than 40,000 passengers in 2006. For the same reasons that small communities nationwide have experienced difficulties maintaining passenger traffic and services over the past 5 to 10 years (including increases in regional carrier aircraft size and the frequent presence of significant fare premiums compared to larger surrounding airports), these three smallest Washington commercial airports could have a difficult time maintaining existing levels of passenger traffic and scheduled airline services over the forecast period.

If at some point in the future, the airline serving one of these communities made the decision to withdraw its service, the federal Essential Air Service (EAS) Program would act to prevent a total loss of scheduled airline service. The Essential Air Service program was established when Airline Deregulation was enacted in 1978, in response to concerns that the new freedom given to airlines to enter or exit markets at will would result in the loss of scheduled airline services at many small communities.

The EAS program provides that any small community that was listed on an air carrier operating certificate prior to Deregulation would be guaranteed to receive a minimum level of scheduled airline service, even if this required the payment of subsidy. The EAS program generally guarantees a service level of 2 or 3 daily roundtrips to a designated hub airport, typically with 19-seat aircraft. In recent years, program eligibility requirements were tightened to prohibit the payment of subsidy at communities that were located within 70 road miles of an FAA-designated Large or Medium-Hub airport, and at communities where the subsidy per passenger is greater than \$200. The Essential Air Service program is funded by the federal budget and continued program funding is subject to the budgetary decisions of Congress.

Even with EAS protection, however, communities are guaranteed only a minimum level of service, and many communities subsidized under the EAS program have experienced continuing declines in passenger traffic.

⁵ This excludes a series of Washington State airports that receive niche scheduled airline services, typically with sea planes, that is not designed to provide inter-city transportation and/or provide links to the national air transportation system.