

## CHAPTER 6: WHAT DID WE LEARN?

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Is the state meeting current demand and performance objectives? This section summarizes some of the key findings from the Phase I assessment to help answer those crucial questions. This section also identifies key areas of further evaluation for the remaining two phases.

As the first comprehensive airport system study in Washington State in over 20 years, it is important that LATS thoroughly evaluate capacity issues and market demand at all levels from the individual airport level up to the statewide perspective. Since Washington's population and aviation activity are concentrated in four key regions, it is important to identify the potential capacity issues that may have differing impacts throughout the state. The clearer the understanding of these issues, the more effective policy makers can be in targeting airport development and investment for the future.

The capacity findings from Phase I are summarized below and will serve as the foundation for the Phase II efforts, which will include demand forecasts and future capacity. The findings are grouped by the industry capacity measures outlined in Chapter 3.

### **Passenger capacity adequate at Special Emphasis Region Airports with exception of Sea-Tac and Tri-Cities, with Bellingham showing signs of capacity constraint**

Based on the peak hour passenger demand and terminal capacities analyzed above, the Seattle-Tacoma International Airport and the Tri-Cities Airport, both at 68 percent capacity, exceed the 60 percent threshold identified by FAA to initiate planning for new facilities. In fact, the two airports have nearly reached the 70 percent capacity level where FAA recommends additional capacity should be in place. Bellingham's market dynamics have changed considerably as new larger jet service has increased between 2005 and 2006 (130-150 seat MD80s), causing peak-hour capacity constraint issues.

All other airports evaluated under the Special Emphasis Regions have ample reserve peak hour passenger capacity.

#### ***Discussion:***

The airports continue to operate efficiently today, but exceed 60 percent utilization threshold set by the FAA as the point at which airports should

begin planning for expansion. Sea-Tac will open a third runway that is fully operation in 2009 and has been planning for this infrastructure since the early 1990's. However, even with this new runway capacity, Sea-Tac airport planners estimate air side capacity will reach its peak at approximately 2021 to 2023. These demand and capacity estimates assume no unforeseen industry shocks like the events of September 11th. There are no plans for any further airside expansion at Sea-Tac.

Tri-Cities has performed an aircraft parking study evaluating further ramp and aircraft parking positions on the airside and they are watching airside capacity issues closely as service and passenger demand continues to grow.

Currently, Bellingham is developing plans to evaluate terminal expansion alternatives to meet the needs of the new service growth.

Phase II will include a market demand analysis that will closely examine the need for passenger service in Washington. There appears to be adequate reserve capacity in the state aviation system to accommodate passenger services, but will it be enough to serve the demand anticipated in the next 20 years? More importantly, will regional capacity adequately serve focused market demand concentrated in select areas across the state?

### **Ample cargo capacity exists statewide with the exception of Boeing Field and Sea-Tac**

The analysis of cargo facilities presented above concluded that, with the exception of Boeing-Field/King County International Airport and Seattle-Tacoma International Airport, there is ample cargo capacity at the remaining airports throughout Washington State. Boeing Field and Sea-Tac Airports are at approximately 80 percent and 60 percent of their respective capacities. Given the distribution of population within the Puget Sound Region and economic influences driving forces driving cargo activity at these two airports, it may be difficult to relocate future cargo activity to other airports in Washington State with available capacity. The cargo demand forecasts prepared under Phase II of this analysis will identify future anticipated cargo demand throughout the state system.

### **Many areas of the state are approaching capacity for aircraft storage**

The aircraft storage and parking for the total of all Washington airports has reached 85 percent of its existing capacity. Several of the airports throughout Washington State have reached or exceeded the existing aircraft storage capacity, including: Harvey Field, Renton Municipal, Sea-Tac International, Spokane International, Cross Winds, Fly for Fun,

Cedars North Airpark. While many of the airports still have existing excess aircraft storage capacity, the majority of available storage is with aircraft tie-downs rather than hangars. The actual demand for hangars is far greater than demand for tie-downs as most aircraft owners prefer secure, weather-proof storage facilities. This demand has resulted in the creation of wait lists by airports to track the individuals who desire hangar rentals at their airport. The survey information illustrates a total of 651 individuals are currently on hangar wait lists throughout the state.

### ***Discussion:***

Aircraft storage facilities are vitally important for supporting general aviation activity in Washington. Hangars and tiedowns provide access to the air transportation system for local pilots, and facilitate transient aircraft visiting the community or utilizing aviation-related services at the airport. The limited amount of reserve capacity in certain areas of the state degrades access to the air transportation, even in the short term.

The demand forecasts conducted in Phase II will identify future demand for based aircraft storage at the state's airports and compare future needs to existing capacity. It is likely that existing facilities may not be adequate to accommodate future needs.

### **Six airports appear to be at or nearing operations capacity**

The three Commercial Service airports, Boeing Field, Kenmore Air Harbor and Sea-Tac are the most severely impacted airports relative to reserve operations capacity, with Boeing Field the most impacted Commercial Service airport in the state. Of the remaining land-based airports, the Regional Service facilities of Auburn Municipal and Harvey currently exceed the FAA's 60 percent planning threshold while Ephrata Municipal, a Local Community facility, is approaching 60 percent capacity. However, the majority of Ephrata's operations are glider aircraft, serving a large recreation role for the state system. The Kenmore Air Harbor is well over capacity – particularly significant given the busy marine environment within which it operates.

It should be emphasized that the reserve operations capacities identified below, and throughout the analyses presented above, are existing capacities based on 2005 data. Subsequent analyses under Phase II of this study will generate forecasts of future demand for airports throughout Washington State. Once the forecasts are completed, the available reserve capacity of each individual airport, as well as the state system as a whole, will need to be revisited to assess the implications of long-term trends in aviation demand versus capacity of the system.

***Discussion:***

The airports identified are currently utilizing 60 percent or more of existing capacity. Five of the six airports are located in the Puget Sound Region. Ephrata, located in Grant County, is largely a recreation facility serving glider activity. Ephrata's ability to serve this type of activity allows other existing facilities to accommodate different user types. Thus Ephrata plays an important role in the overall system and its capacity to accommodate future recreational growth is important to monitor.

This capacity analysis is based on existing conditions. Phase II will include demand forecasts to identify future demand for air transportation in Washington. Future demand will be compared to existing capacity to determine future needs for improvement and/or expansion.

**Airports statewide are demonstrating moderate performance on minimum criteria**

While many airports are at various stages of compliance with state planning law, a majority of airports systemwide do not meet all criteria for compatible land use and zoning. There is high compliance on wind cone and rotating beacon visual navigation aids, but significantly fewer airports have a segmented circle.

***Discussion:***

Minimum criteria were set to ensure a basic level of operational safety and preservation at the state's public-use airports.

**Commercial Service and Regional Service airports providing high level of service and safe travel for general aviation**

Nearly all Commercial Service and Regional Service airports meet the performance objectives for parallel taxiways. A majority of Commercial Service and Regional Service airports meet the performance objectives for runway length. A majority of Commercial Service airports meet the performance objective for runway lighting. Only 17 percent of Regional Service airports have the HIRL identified in the performance objective, although a majority of the deficient airports do have MIRL.

A majority of Commercial Service airports meet the performance objective and have a precision or ½ mile visibility minimum. A minority of Regional Service airports meet this performance objective.

All airports in the Commercial Service classification and a majority of airports in the Regional Service classification provide real-time weather reporting. Maintenance service and fuel sales are widely available at Commercial Service and Regional Service airports.

***Discussion:***

Both classifications are performing well in terms of providing appropriate services for airport users. It is significant that although general aviation operations are higher at Commercial Service airports, Regional Service airports provide the greatest level of support services for general aviation pilots.

**Local Community airports with ten or more based aircraft have high compliance on five of seven performance objectives**

A majority of airports in this classification meet the objectives for runway lighting, Visual Guide Slope Indicator, parallel taxiways and fuel sales. More than half the Local Community airports with ten or more based aircraft meet the performance objective for the availability of minor maintenance service. Airports in this classification had the weakest performance on runway length and superunicom weather reporting.

***Discussion:***

Compliance on parallel taxiways is high for this category, as is performance among airports in this classification on runway lighting. Performance on approach capability and weather reporting was relatively low, however, limiting 24-hour and all weather access to Local Community airports. Compliance was high on most service level objectives. Only 47 percent of airports met the runway length performance objective, however; suggesting limited access for larger aircraft at these airports.

**While the airports have adequate approaches and many meet the performance objective for runway length, a minority of Recreation or Remote and Local Community airports with fewer than ten based aircraft meet the performance objective for runway turnarounds**

Improvements to approaches are not needed for airports in these classifications. Performance on the runway lighting objective is high in the Local Community classification – all but one airport have reflectors or a more advanced lighting system. Conversely, performance among the Recreation or Remote airports is low. Just over half the airports in the Local Community classification meet the performance objective for runway length, while 64 percent of Recreation or Remote airports meet the objective. A minority of airports in these classifications meet the performance objective for providing a runway turnaround or parallel taxiway.

***Discussion:***

Recreation and Remote airports also show low compliance with the runway lighting performance objective. Airports in these classifications generally meet service level objectives. Approach capability beyond visual is not identified, and a majority of the airports meet the performance objective for runway length.

**Seaplane bases provide adequate service levels**

Improvements to approaches are not necessary for this classification. All but one of the seaplane bases in the state aviation system provides dock facilities.

***Discussion:***

Based on existing criteria, seaplane bases in Washington are providing aviation users with adequate approaches and dock facilities for aircraft storage.