

# EXECUTIVE SUMMARY

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*The dynamic Washington public airport system represents an essential element of the state transportation system and provides critical support to the Washington economy*

Washington's 138 public-use airports represent an essential element of the State transportation system and provide critical support to the State economy. The importance of air transportation in Washington is accentuated by the State's unique geographic and topographical features, which produce an unusually high reliance on aviation, not only for intercity transport of people and cargo, but also for firefighting, medical evacuation, and other emergency services. Washington's airports span a broad range in terms of scale and role, from Seattle-Tacoma International Airport—the nation's 18<sup>th</sup> busiest commercial airport—down to 39 remote or recreational airports, many served only by turf runways. The Division of Aviation of the Washington State Department of Transportation has undertaken this air transportation system plan to ensure that the State's system of public-use airports receives the care and funding that is required to effectively serve the needs of Washington residents, businesses and visitors, well into the future.

Here are some quick facts about aviation in Washington:

- Over 17 million scheduled passengers depart from Washington airports every year
- About 3.7 million aircraft landings/departures occur every year
- More than 600,000 tons of air cargo flow through the state's airports annually
- Statewide commercial and general aviation activity together generate approximately 171,000 jobs, \$4.1 million in wages, and \$18.6 billion in total output<sup>1</sup>

*A long-term statewide plan is needed to account for significant population growth and to address a variety of challenges expected over the next 25 years*

In order to continue to meet air transportation needs in the state, Washington's airport system must be maintained and improved under a coherent statewide plan. Significant challenges that face the state's aviation system in the next 25 years include:

- Population in Washington has doubled in the last 30 years and will increase by an additional 2.5 million or 40 percent by 2030.
- Limited funding
- Concentration of aviation activity in key regions of the state

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<sup>1</sup> Washington State Department of Transportation, Aviation Division: Aviation System Plan – Forecast and Economic Analysis Study, 2001.

- Local land use conflicts
- Uncertain economic conditions

All these factors underscore the importance of long range aviation planning in Washington.

## Washington State Long-Term Air Transportation Study (LATS)

*The Washington State Long-Term Air Transportation Study (LATS) was authorized in 2005*

In 2005, the Governor authorized the Washington State Long-Term Air Transportation Study (LATS) through Engrossed Substitute Senate Bill (ESSB) 5121. This legislation directed the Washington State Department of Transportation (WSDOT) Aviation to assess existing statewide aviation capacity and implement a plan to address Washington’s future air transportation needs.

The bill authorized a long-term planning study for general aviation and commercial airports in Washington State, with primary focus on commercial aviation as well as on four Special Emphasis Regions identified in the legislation – Puget Sound, Southwest Washington, Spokane, and Tri-Cities.

The study was developed in three phases, as shown in Exhibit ES-1.

### Exhibit ES-1: The Three Phases of LATS

| <b>Phase I:<br/>What do we have?</b>  | <b>Phase II:<br/>What do we need?</b>   | <b>Phase III:<br/>How will we get there?</b>   |
|---|---|--|
| Performed a statewide airport facilities and capacity assessment, including an analysis of current utilization. | Developed 25-year market forecasts of each airport in Washington State, including forecast of aircraft operations, passengers, and air cargo. In addition, the role of high-speed passenger rail was assessed for its ability to relieve future constraints in aviation system capacity | The Washington State Aviation Planning Council will consider the LATS Phases I and II findings as well as public input. This data and information will be used to shape future aviation policy and recommend how best to meet the state's long-term commercial and general aviation airport needs consistent with ESSB 5121. |
| <i>Completed<br/>September 2006</i>   | <i>Completed<br/>July 2007</i>  | <i>To be completed<br/>July 2009</i>   |

LATS findings and recommendations will be integrated into the Washington Transportation Plan (WTP), the Federal Aviation Administration (FAA) National Plan of Integrated Airport Systems (NPIAS), and regional and local transportation plans.

### **Aviation Planning Council**

Pursuant to ESSB 5121, a ten-member Washington State Aviation Planning Council was appointed in Phase III of LATS to develop recommendations for the state air transport system based on LATS findings. The Aviation Planning Council was comprised of representatives from varying geographical areas with diverse aviation-related backgrounds. The Council was formed to:

*An Aviation Planning Council was appointed to develop recommendations based on LATS findings*

- Make recommendations based on LATS I and II findings regarding how best to meet statewide commercial and general aviation capacity needs;
- Determine which regions of the state are in need of improvement regarding the matching of existing or projected airport facilities and the long-range capacity needs within the region;
- Make recommendations regarding the placement of future commercial and general aviation airport facilities to meet future aviation needs;
- Include public input in making final recommendations.

This system plan presents the findings and recommendations from LATS. This plan represents the first comprehensive airport system planning effort in Washington State in over 20 years. The plan addresses the issues raised in ESSB 5121 and is consistent with Federal Aviation Regulations (FAR) Advisory Circular (AC) 150/5070-7 “The Airport System Planning Process.”

### **System Plan Components**

*The system plan considers a variety of technical tasks and analyses completed in LATS*

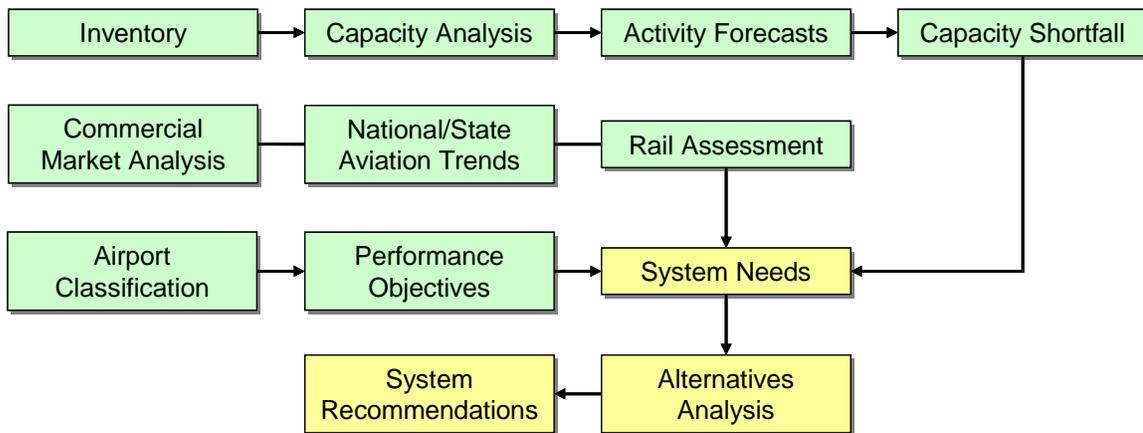
The system plan considers a variety of technical tasks and analyses conducted throughout LATS. As depicted in Exhibit ES-2, findings from analyses culminate in the development of recommendations for the Washington State aviation system.

The technical tasks completed in LATS include:

- Inventory of existing facilities and activity at Washington public airports

- Capacity analysis and airspace assessment for Washington public airports
- Review of national and state aviation trends
- Market analyses for Washington’s commercial airports
- Development of a State Airport Classification System, and the establishment of measurable performance objectives for each airport class
- Forecasts of future aviation activity in Washington, including airline passenger traffic, general aviation activity, and air cargo
- Determination of future capacity shortfalls at the individual airport and regional levels
- Analysis of capacity and demand in the four Special Emphasis Regions across the state
- High-speed rail service assessment to determine whether proposed rail improvements will alleviate capacity constraints in the aviation system
- Identification and evaluation of alternative strategies that address the long-term needs of the Washington aviation system

**Exhibit ES-2: The Washington Aviation System Plan Components**



## Special Emphasis Regions

*The four Special Emphasis Regions are key centers of population, employment and economic activity in*

The Washington State Legislature specifically designated four geographic regions for special attention in this study because they constitute key centers of population, employment and economic activity. Activity within these regions is considered to be vital to the health of the state economy. The four designated Special Emphasis Regions are:

1. **Puget Sound:** consisting of King, Snohomish, Pierce, and Kitsap Counties
2. **Southwest Washington:** consisting of Clark and Cowlitz Counties
3. **Spokane:** consisting of Spokane County
4. **Tri-Cities:** consisting of Benton and Franklin Counties

Exhibit ES-3 below shows the location of the four Special Emphasis Regions.

**Exhibit ES-3: Washington State Special Emphasis Regions**



## Public Participation

*Public participation  
was a central part of  
the study process*

Public participation has been an important part of LATS. Throughout the study, outreach activities have been conducted in order to inform the public of LATS findings and progress, and to elicit invaluable public input. The Aviation Planning Council considered both technical findings and public input when developing recommendations. The public outreach process was extensive, and included multiple approaches designed to capture input and reactions of organized stakeholder groups as well as the general public from all areas of the state. The following outreach opportunities were available during the study:

- A series of Regional Public Meetings conducted across the state during each phase of LATS
- Two Electronic Town Halls – August 2008 and November 2008
- Online Survey – March 2009
- Briefings to government entities and other organizations throughout LATS
- Media Releases
- E-Newsletters
- Aviation Planning Council Meetings/Workshops – 11 meetings throughout the project
- LATS Project Website – [www.wsdot.wa.gov/Aviation/lats](http://www.wsdot.wa.gov/Aviation/lats)

Consistent with previous phases of LATS, electronic communication played an important role in the Phase III public outreach program and enabled the Aviation Planning Council to obtain feedback from all areas of the state. Two 60-minute Electronic Town Halls were held online via a moderated session. Key advantages of the Electronic Town Halls include improved sample representation, the ability to present complex information in graphic form with narration from the moderator, and a live question and answer session.

WSDOT also conducted an online survey to assess public opinion on the issues discussed by the Aviation Planning Council during LATS Phase III. The online survey provided the Council with statistically valid feedback from a representative sample of Washington residents and provided an opportunity to cross check findings from the electronic town halls and regional public meetings.

The LATS website was a primary means of sharing project information with the public. The website provided ongoing updates about the project including links to Aviation Planning Council meeting materials and

summaries, links to working papers, presentation materials, and reports. WSDOT Aviation News Service, a 4,000-person list serve maintained by WSDOT Aviation, served as a timely tool for ongoing communications with the public. List serve members received project updates and announcements about Aviation Planning Council meetings and public meetings.

## Washington Public Airport Classification System

*Washington has a system of 138 public airports, ranging from small general aviation facilities to the state's primary commercial airport Sea-Tac*

Washington State currently has 138 airports open for public use. Washington public airports range from small general aviation facilities – home to a handful of piston aircraft – to the state's primary commercial airport, Seattle-Tacoma International – which ranked 18<sup>th</sup> in the nation in terms of passenger volume in 2007. Sixty-five state airports are identified as significant to the national airport system by the FAA and included in the FAA's National Plan of Integrated Airports (NPIAS). These airports are eligible to receive federal funding through the FAA Airports Improvement Program (AIP).

Within the state system, individual airports contribute at varying levels and serve different roles in meeting statewide air transportation demand.

*A state airport classification system was developed to identify the role of each airport in the state system*

LATS established a state airport classification system to identify the role of each airport in the system and determine the types of facilities and services necessary at each. Factors considered in determining airport classifications include runway length, based aircraft, economic impact, population served, and service area driving time.

Six classifications are used in the Washington State airport classification system:

- Commercial Service Airports
- Regional Service Airports
- Community Service Airports
- Local Service Airports
- Rural Essential Airports
- Seaplane Bases

Exhibit ES-4 shows the distribution of Washington's public use airports among the six classifications and lists the threshold criteria associated with each role.

### Exhibit ES-4: Distribution of Airports by Classification

| Classification     | No. of Airports | Description  |
|--------------------|-----------------|--|
| Commercial Service | 16              | Accommodates at least 2,500 scheduled passenger boardings per year for at least three years.                                     |
| Regional Service   | 19              | Serves large or multiple communities; all NPIAS Relievers; 40 or more based aircraft and 4,000-foot long runway, with exceptions |
| Community Service  | 23              | Serves a community; at least 20 based aircraft; paved runway   |
| Local Service      | 33              | Serves a community; fewer than 20 based aircraft; paved runway   |
| Rural Essential    | 38              | Other land-based airports, including residential airparks  |
| Seaplane Bases     | 9               | Identified by FAA as a seaplane base, unless it is a Commercial Service Airport  |

*Commercial Service and Regional Service airports accommodate high levels of activity and typically handle high performance aircraft such as jets*

The first two classifications, Commercial Service Airports and Regional Service Airports, have the largest service areas, in terms of driving time and population. Airports in both classifications accommodate high levels of activity and are typically capable of handling high performance aircraft such as regional/corporate jets and turboprops.<sup>2</sup> Their ability to accommodate jet traffic makes them vital assets for regional economic development and quality of life.

Most Regional Service airports can accept emergency passenger and cargo flights in large aircraft<sup>3</sup>, should Commercial Service Airports or ground transportation modes be incapacitated by natural or manmade disaster. In addition, Regional Service Airports include the facilities most likely to grow into new Commercial Service Airports in the future. WSDOT's goal for providing access to Regional Service Airports is that nearly every Washington resident should be able to reach a "jet-capable" Regional Service or comparable Commercial Service Airport within 90 minutes.

This principle recognizes that most of the Commercial Service Airports in Washington also have the capacity for and provide the facilities and services needed for high levels of general aviation activity and for jet aircraft.

<sup>2</sup> This capability is not present at certain Reliever airports that are designed for small aircraft.

<sup>3</sup> Aircraft with maximum takeoff weight over 12,500 pounds

*Community Service and  
Local Service Airports  
serve small to medium-  
sized communities*

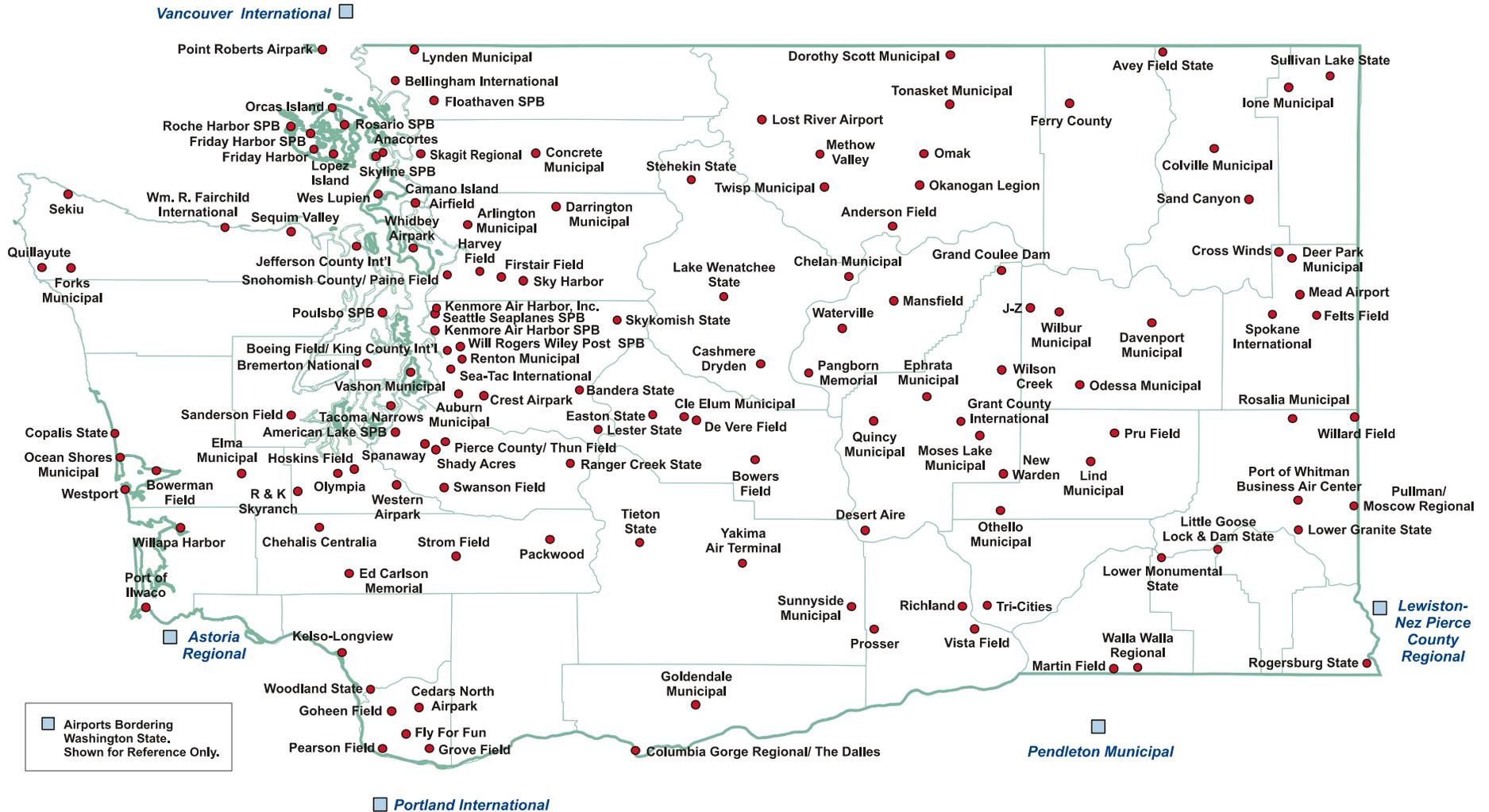
The Community Service and Local Service Airports serve small-to medium-sized communities. An airport in one of these two classifications accommodates a fairly wide range of general aviation activities such as agriculture interests, business support and emergency medical transportation that are important to the community's economic well-being and quality of life.

*Rural Essential Airports  
and Seaplane Bases  
serve narrower scopes of  
general aviation*

The Rural Essential Airports and Seaplane Bases serve narrower scopes of general aviation. An airport in one of these two classifications typically owes its existence to geographic circumstances (e.g., a residential airpark, recreational destination, body of water, or fire fighting / emergency landing area in the mountains), rather than to demand from the population within its service area.

Some of the Rural Essential Airports are very busy airparks. Nevertheless, the presence of residential uses close to the runway may pose a challenge for airport operations. Residential land uses are generally considered incompatible land uses when located adjacent to airports because airport operations create noise, vibrations and other effects that affect quality of life. While residents of airpark communities are typically aircraft owners, properties could eventually be sold to persons who do not own aircraft or are not aviation enthusiasts, which could affect the long-term viability of the airport. For this reason, their role in providing transportation access in the state system is limited.

## Exhibit ES-5: Washington State Public Use Airports System



Note: When LATS was initiated in 2005, public use airports also included Evergreen Field (closed July 2006), Hillcrest Airport (converted to private use), and Blaine Municipal (closed December 2008). As of June 2009, other status changes include the closure of J-Z Airport in Almira and the conversion of Western Airpark in Yelm to private use.

## Washington Public Airport Performance Objectives

*Performance objectives were developed to set targets for airport facilities, services and operational capabilities for each airport classification level*

Performance objectives targeting airport facilities, services and operational capabilities were developed for each class of airports during LATS. While the classification system assigns airports based on their function and role, the performance objectives establish measurable goals for each airport classification level within Washington's air transportation system.

Two types of performance objectives are proposed: 1) those that relate to all classifications, and 2) those that are customized for the facilities and services appropriate to each classification. The Commercial Service and Regional Service Airports have the same facility and service objectives because of the similarity of baseline needs for commercial passenger jets and corporate jets. In addition, it is possible that some airports will move between the two classifications, as airline service starts and stops and as the number of annual passenger boardings fluctuates above and below 2,500.

Performance objectives for Community Service Airports are focused on accommodating a variety of general aviation aircraft, air taxi operations, and potential operations in very light jets (VLJ). Local Service Airports have facility and service objectives geared to small piston general aviation and visual operations.

Rural Essential Airports and Seaplane Bases have no service objectives and few facility objectives, reflecting the lower level of facilities and services needed at these airports, compared to the other classifications.

Exhibit ES-6 summarizes the performance objectives and indicates their applicability to the various state classifications. Proposed performance objectives in the areas of operational factors, up-to-date plans and land use compatibility protection are applicable to all public airports in the state. Performance objectives related to airport facilities and services are tailored to the various airport classifications.

The performance objectives provide a means to evaluate facilities, services, and other important factors for each type of airport in the state system. Assessing if individual airports meet their appropriate performance objectives helps to identify improvements needed for enhancing the statewide airport system.

**Exhibit ES-6: Performance Objectives and Their Applicability to Airport Classifications**

|  | <b>Objective</b>                                      | <b>Commercial Service</b>                   | <b>Regional Service</b>                     | <b>Community Service</b>         | <b>Local Service</b> | <b>Rural Essential</b> | <b>Seaplane Base</b> |
|--|---|---|---|----------------------------------|----------------------|------------------------|----------------------|
| <b>Operational Factors</b>               | <i>Standard runway safety area</i>                    | X   | X   | X                                | X                    | X                      | NA                   |
|  | <i>Runway PCI 75</i>                                  | X   | X   | X                                | X                    | X                      | NA                   |
|  | <i>Taxiway PCI 70</i>                                 | X   | X   | X                                | X                    | X                      | NA                   |
|  | <i>Apron PCI 70</i>                                   | X   | X   | X                                | X                    | X                      | NA                   |
|  | <i>No obstacles in threshold siting surface</i>       | X   | X   | X                                | X                    | X                      | X                    |
|  | <i>No obstacles in obstacle free zone</i>             | X   | X   | X                                | X                    | X                      | X                    |
| <b>Plan</b>                              | <i>Planning documents less than 7 years old</i>       | X   | X   | X                                | X                    | X                      | X                    |
| <b>Land Use Compatibility Protection</b> | <i>Compatibility policies in comprehensive plan</i>   | X   | X   | X                                | X                    | X                      | X                    |
|  | <i>Appropriate zoning designation for airport</i>     | X   | X   | X                                | X                    | X                      | X                    |
|  | <i>Land use controlled in runway protection zones</i> | X   | X   | X                                | X                    | X                      | X                    |
|  | <i>Height hazard zoning or regulations</i>            | X   | X   | X                                | X                    | X                      | X                    |
|  | <i>Zoning discourages incompatible development</i>    | X   | X   | X                                | X                    | X                      | X                    |
| <b>Facilities</b>                        | <i>Runway Length</i>                                  | <i>5,000 feet</i>                           | <i>5,000 feet</i>                           | <i>3,200 feet</i>                | <i>2,400 feet</i>    | <i>No objective</i>    | <i>No objective</i>  |
|  | <i>Taxiway</i>  | <i>Parallel</i>                             | <i>Parallel</i>                             | <i>Parallel</i>                  | <i>Turn-around</i>   | <i>Turn-around</i>     | <i>No objective</i>  |
|  | <i>Instrument Approach</i>                            | <i>Lower than ¼ mile visibility minimum</i> | <i>Lower than ¼ mile visibility minimum</i> | <i>1 mile visibility minimum</i> | <i>No objective</i>  | <i>No objective</i>    | <i>No objective</i>  |
|  | <i>Lighting</i>                                       | <i>Medium intensity</i>                     | <i>Medium intensity</i>                     | <i>Medium intensity</i>          | <i>Low intensity</i> | <i>Reflectors</i>      | <i>NA</i>            |
|  | <i>Visual Glide Slope Indicators</i>                  | X   | X   | X                                | X                    | <i>No objective</i>    | <i>NA</i>            |
|  | <i>Weather Reporting</i>                              | <i>AWOS or ASOS</i>                         | <i>AWOS or ASOS</i>                         | <i>Super-Unicom</i>              | <i>No objective</i>  | <i>No objective</i>    | <i>No objective</i>  |
|  | <i>Dock Facility</i>                                  | <i>NA</i>                                   | <i>NA</i>                                   | <i>NA</i>                        | <i>NA</i>            | <i>NA</i>              | <i>Yes</i>           |
| <b>Services</b>                          | <i>Fuel Sales</i>                                     | <i>Jet A and 100LL</i>                      | <i>Jet A and 100LL</i>                      | <i>100LL</i>                     | <i>No objective</i>  | <i>No objective</i>    | <i>No objective</i>  |
|  | <i>Maintenance Service</i>                            | <i>Major</i>                                | <i>Major</i>                                | <i>Minor</i>                     | <i>No objective</i>  | <i>No objective</i>    | <i>No objective</i>  |

## **Achievement of Performance Objectives**

*Washington's airports vary in their ability to meet the established performance objectives*

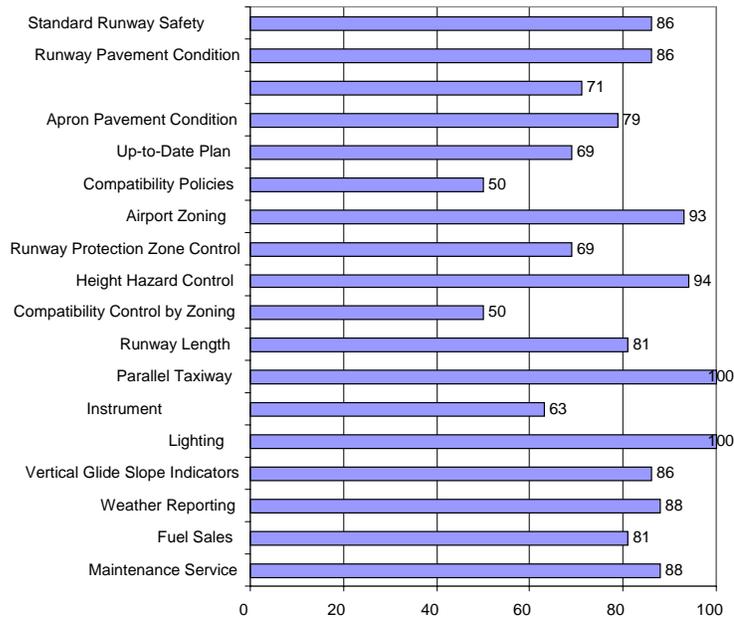
Washington's airports vary in their ability to meet the established performance objectives. As might be expected, Washington's Commercial Service airports are better at meeting performance objectives than the other airport classifications. However, addressing deficiencies at the Commercial Service airports will be much more costly than for any other classification. Considered on a statewide basis, the system performs best with regard to runway, taxiway, and apron pavement condition. This performance reflects past federal and state investments in pavement preservation. On the other hand, all airport classifications need improvement in meeting objectives for land use compatibility protection.

Some key challenges to be addressed include the following:

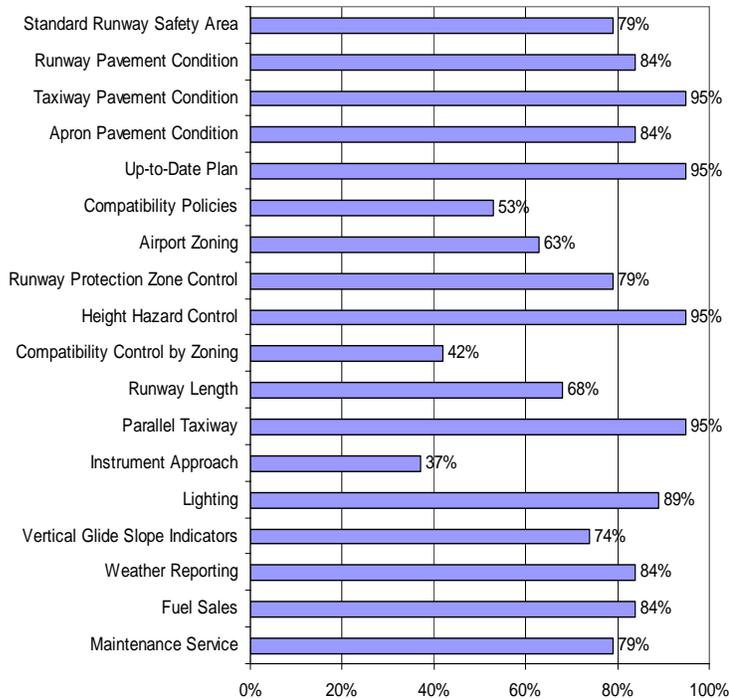
- Only 63 percent of Commercial Service airports meet the objective to have a precision instrument approach, which is a fundamental need for airline service.
- Only 37 percent of Regional Service airports have a precision instrument approach and only 68 percent have a runway at least 5,000 feet long, both factors important for the airports to be "jet capable." The accommodation of jet traffic is important to Regional Service Airports in order to serve corporate aviation, support disaster relief, and possibly accommodate future airline service.
- The Community Service airports are less than 50 percent compliant with the objectives for a nonprecision instrument approach, standard runway safety area, and weather reporting. These deficiencies hurt the all-weather capability of Community Service airports, which are relied on by small and medium sized communities for medevac.
- Local Service airports' main deficiencies are standard runway safety area and vertical glide slope indicators—both safety-critical needs.

Results from the performance assessment are displayed in Exhibits ES-7 to ES-12. The Exhibits show the percent of airports within each airport class that meet the established performance objectives.

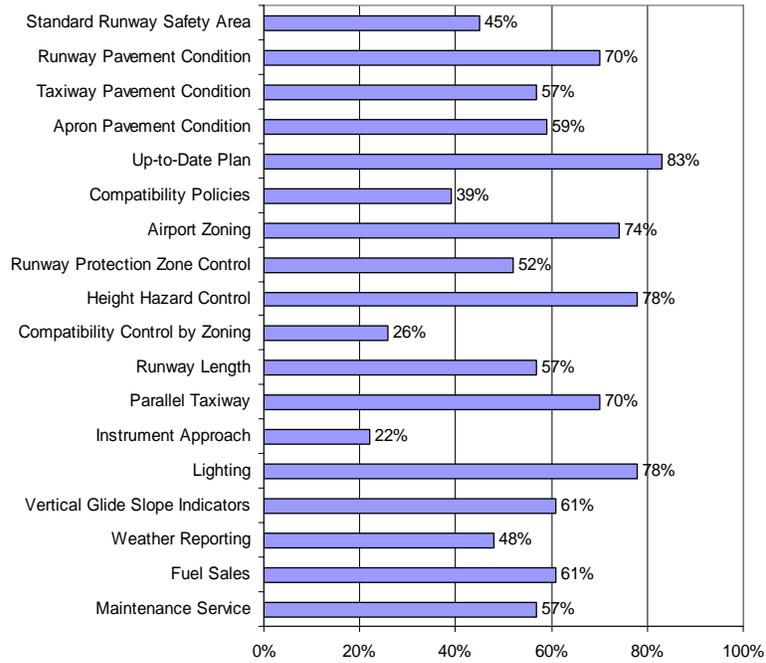
## Exhibit ES-7: Commercial Service Airports Performance Assessment



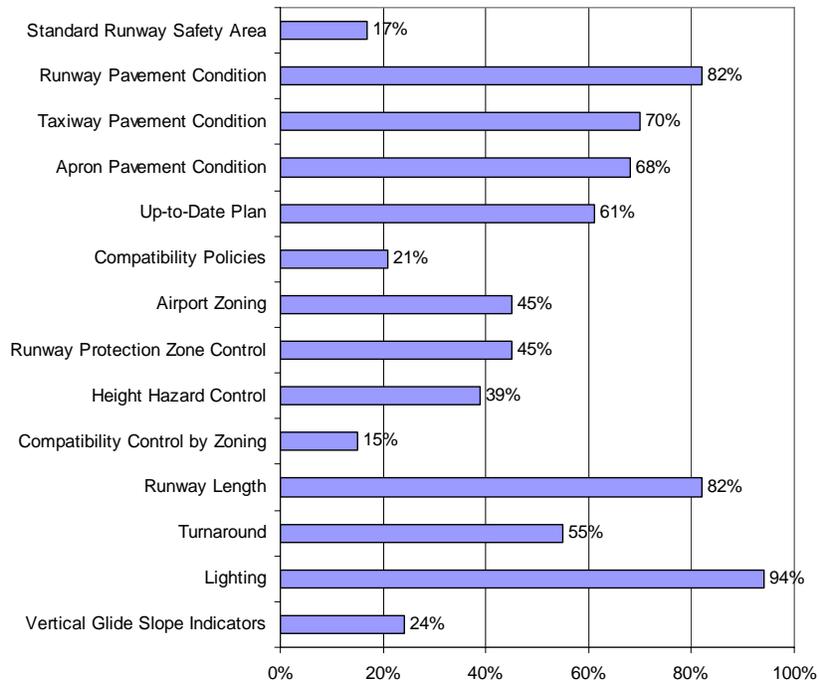
## Exhibit ES-8: Regional Service Airports Performance Assessment



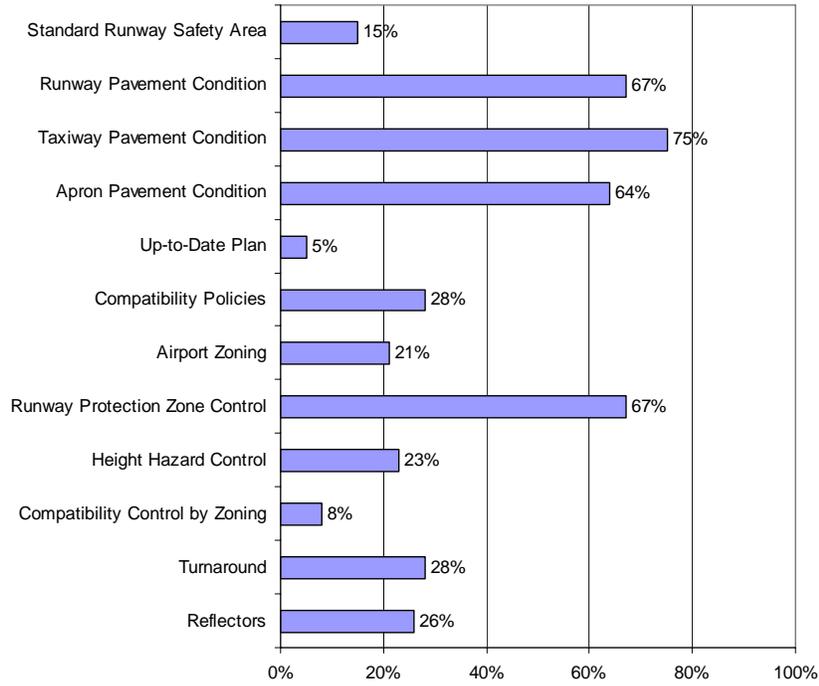
### Exhibit ES-9: Community Service Airports Performance Assessment



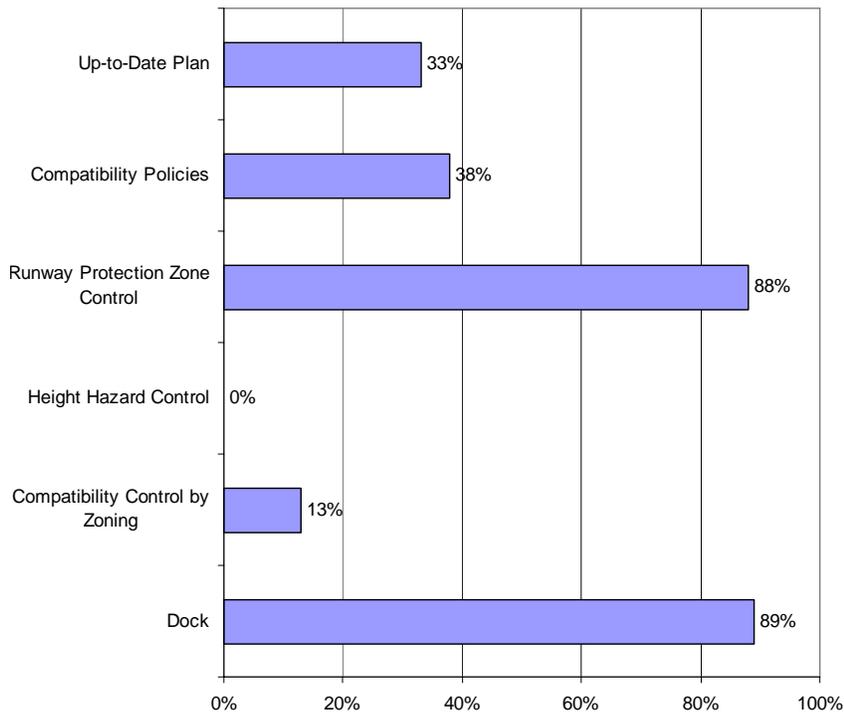
### Exhibit ES-10: Local Service Airports Performance Assessment



### Exhibit ES-11: Rural Essential Airports Performance Assessment



### Exhibit ES-12: Seaplane Bases Performance Assessment



## State Aviation Forecasts

*Forecasts were developed to identify future demand in commercial passenger traffic, GA activity, and air cargo activity*

Forecasting future aviation demand is critical to long range facility planning for the state. In LATS, forecasts of future activity at public use airports across Washington State were developed. The forecasts identify expected demand in commercial passenger traffic, general aviation activity, and air cargo activity in Washington through 2030. Forecast results are summarized below.

- Between 2005 and 2030, passenger enplanements at Washington State's airports are forecast to increase by 85 percent, from 17 million to 31 million -- or 2.5 percent per year on average.
- Passenger traffic in Washington State is projected to remain highly concentrated at Seattle-Tacoma International and Spokane International airports for the foreseeable future. The forecast projects that in 2030, Sea-Tac will still account for 85 percent of the state's total enplanements, and Spokane will account for an additional 11 percent.
- The state's commercial passenger aircraft operations are projected to increase at a healthy 2.1 percent per year, from 570,000 in 2005 to 960,000 by 2030. This represents a 69 percent increase in commercial operations between 2005 and 2030. Commercial operations are expected to grow more slowly than enplanements, as aircraft size, load factors and average passenger loads increase in the future in line with national trends.
- In 2005, approximately 8,100 general aviation aircraft were based at public use airports in Washington State. The number of statewide based aircraft is forecast to increase to approximately 9,700 aircraft in 2015, and 11,800 aircraft in 2030. From 2005 to 2030, the state's based aircraft will increase at an average annual rate of 1.5 percent. This tracks the national average closely.
- Washington State's general aviation aircraft operations are forecast to increase from 3.0 million in 2005 up to 4.4 million in 2030, representing average annual growth of approximately 1.60 percent. The growth in GA operations is slightly higher than the growth in based GA aircraft, reflecting a small increase in the average number of operations per based aircraft.
- Washington's total air cargo volume is expected to grow from approximately 600,000 tons in 2005 to 1,407,000 tons in 2030. This represents a significant 3.5 percent annual growth over the forecast period.

## Ongoing Forecast Tracking

*Uncertainty surrounding long-term forecasts will be accounted for through ongoing forecast tracking*

There is always uncertainty surrounding long-term forecasts of aviation activity, and the current economic climate clearly introduces the possibility that various segments of the aviation market in Washington State, and across the country, may grow more slowly than forecast. To address this issue, the State is implementing a forecast tracking system to determine on an ongoing basis how actual levels of aviation activity compare with the LATS forecasts. Should it become apparent that the actual levels of commercial, general aviation, and air cargo traffic are substantially different from the forecasts, the State will adjust the timing of the projections to more accurately reflect the observed trends. In this way, the system planning process will be continuously informed by the most recent available information.

## Capacity Analysis

*Existing capacity in the state was compared to expected future activity to identify potential capacity shortfall*

The capacity analysis measures the ability of existing airport facilities and components to accommodate existing and expected future activity. A comparison of existing capacity at Washington airports with forecast activity levels identifies potential capacity constraints or shortfalls across the state.

The capacity analysis in LATS examined five elements of aviation system capacity:

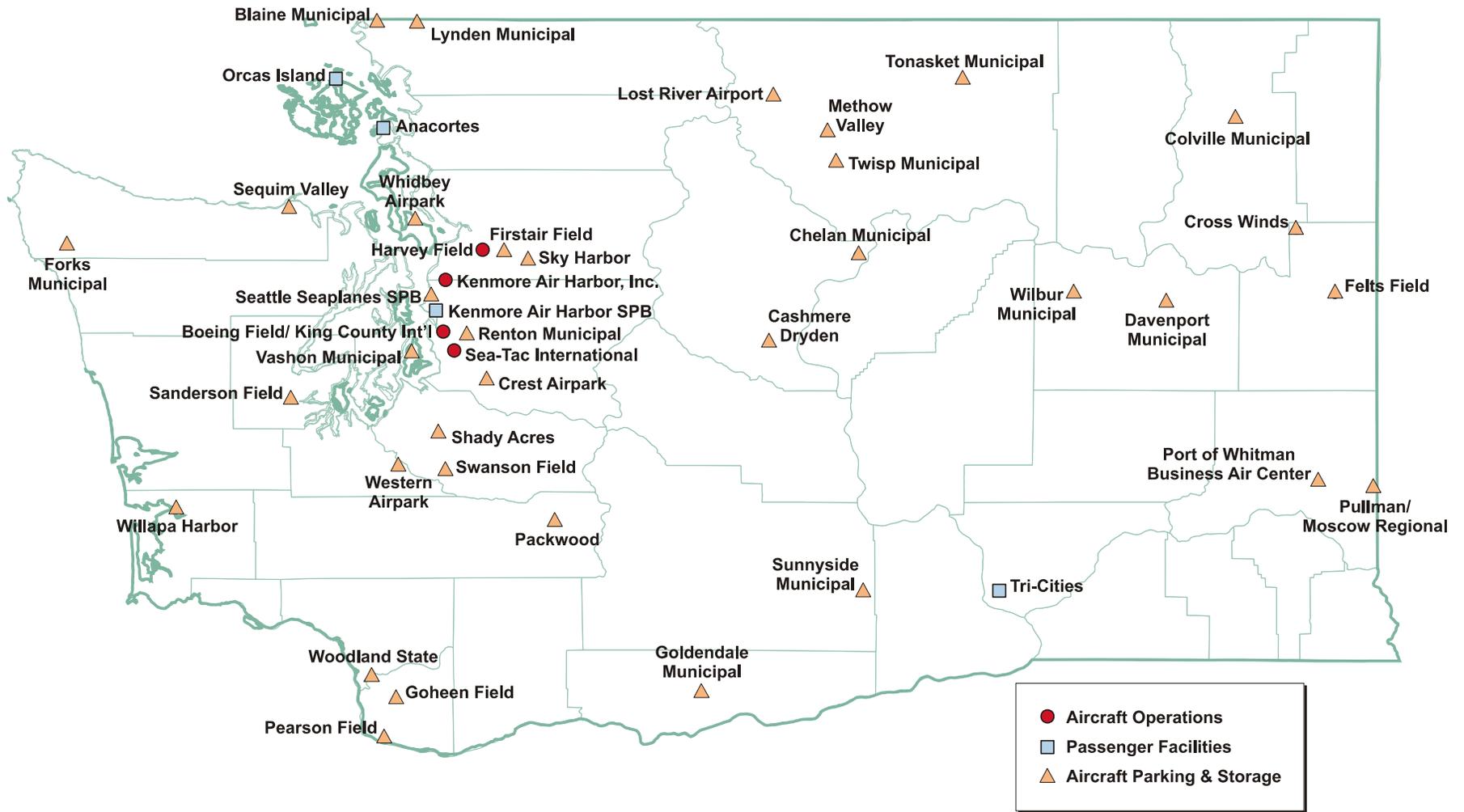
- **Airfield Capacity:** the ability of an airport's runway system to accommodate take-offs and landings without experiencing delays.
- **Commercial Airline Passengers:** the ability of an airport terminal to accommodate airline passengers with adequate space for ticketing, security, and other facilities.
- **Air Cargo:** the ability of an airport to accommodate processing of air cargo tonnage using existing facilities.
- **Aircraft Storage and Parking:** the ability of an airport to accommodate storage of based and transient aircraft in tie-downs and hangars.
- **Airspace System:** the ability of available airspace to safely accommodate aircraft in transit between airports.

*A number of Washington airports are expected to experience either airfield, passenger terminal, or aircraft storage constraints by 2030*

*A number of airports across  
the state are expected to  
experience airfield, passenger  
terminal and/or aircraft  
storage capacity constraints  
by 2030*

A number of airports across Washington are expected to experience either airfield, passenger terminal, or aircraft storage capacity constraints by 2030. These airports are shown in the following exhibit and discussed in the capacity findings that follow.

### Exhibit ES-13: Washington Airports Expected to Approach or Exceed 100% Capacity by 2030



Note: Sea-Tac International and Kenmore Air Harbor Inc. are also constrained in both Passenger Facilities and Aircraft Storage; Boeing Field and Orcas Island are also constrained in Aircraft Storage

## ***Airfield Capacity***

The airfield capacity (or operations capacity) of an airport measures the number of aircraft operations that can be accommodated by the airport's runway/taxiway system without incurring unacceptable levels of congestion and delay. Key findings of the airfield capacity analysis are described below.

- Existing and future levels of aircraft operations activity on a statewide basis are well below the capacity of the aviation system as a whole. However, aircraft operations are not uniformly distributed among Washington State airports. Much of the available capacity is not placed strategically to serve expected demand.
  - In 2005, total aircraft operations in Washington utilized less than 15 percent of overall system operations capacity at the state level. Aircraft demand is expected to only increase from 14.6 percent of capacity in 2005 to 22.5 percent of total system capacity in 2030.
  - The primary capacity issue is the distribution or concentration of demand in the most populated regions of the state, particularly in the Puget Sound Region. Airports located in and around the major population and economic centers of the state experience the greatest demand.
  - The smaller, outlying airports in Washington provide over 60 percent of the state's operations capacity, but only generate about 25 percent of statewide activity. The largest airports provide only one-third of total operations capacity but attract 75 percent of the demand.
- Airfield capacity constraints (or the inability of an airport's runway system to accommodate forecast flight activity) are expected to emerge at twelve airports.
  - Four Washington airports are anticipated to exceed 100 percent of their operating capacity by 2030. The four airports are all located within the Puget Sound Special Emphasis Area and include:
    - Seattle-Tacoma International
    - Boeing Field
    - Harvey Field
    - Kenmore Air Harbor Inc.
  - Eight additional airports in Washington were identified as exceeding the 60 percent capacity planning threshold – the

*Four airports – all located within the Puget Sound Region – are expected to exceed their operational capacity by 2030*

*Eight additional airports are expected to reach 60% capacity and will need to initiate planning for adding capacity*

activity level at which planning should commence for adding capacity – by 2030. These airports include:

- Arlington Municipal
- Auburn Municipal
- Snohomish County/Paine Field
- Crest Airpark
- Friday Harbor
- Kenmore Air Harbor SPB
- Spokane International
- Olympia

- Among the airports expected to experience capacity constraints are several that would be likely to have statewide impact (Seattle-Tacoma International, Boeing Field/King County International and Spokane International).
- In regards to Seattle-Tacoma International, recent trends including higher passenger load factors and an “upgauging” of aircraft size indicate that the airport may now reach its capacity limits beyond 2030. Nevertheless, the airport is still expected to be approaching its capacity limits during the study timeframe, and strategies need to be developed to accommodate future growth in underlying demand.
- The concentration of operations activity within the Puget Sound area results in significant constraints in the region.
  - In 2005, ten of the 20 busiest airports in Washington State were located within the Puget Sound boundary. These airports accommodated approximately 50 percent of total operations statewide.
  - In 2005, operations at six Washington airports exceeded the FAA’s 60 percent threshold for planning additional capacity. All six airports are located within the Puget Sound Special Emphasis Region.
  - Nine airports within the Puget Sound Special Emphasis Area are expected to exceed or approach their operations capacity by 2030.

*Significant constraints are anticipated in the Puget Sound Region*

- The large number of Puget Sound airports anticipated to experience capacity constraints limits the options for managing demand within the region. Methods such as traffic redistribution or demand management are more difficult when all system airports are nearing capacity.

Exhibits ES-14 and ES-15 below summarize the aircraft operations forecast and Airport Service Volume (ASV) or available operational capacity at each of the twelve constrained airports.

**Exhibit ES-14: Airports Exceeding 100 Percent of Operations Capacity by 2030**

|   | ASV     | 2005    | 2010    | 2015    | 2020    | 2025    | 2030    |
|---|---------|---------|---------|---------|---------|---------|---------|
| <b>Commercial Service Airports</b>      |         |         |         |         |         |         |         |
| Boeing Field/King County Int'l          | 380,000 | 251,856 | 305,209 | 368,356 | 423,083 | 482,822 | 549,181 |
| Percent Capacity                        |         | 66%     | 80%     | 97%     | 111%    | 127%    | 145%    |
| Operations Over 100% Capacity           |         |         |         |         | 43,083  | 102,822 | 169,181 |
| Seattle-Tacoma International            | 533,041 | 346,744 | 391,960 | 443,068 | 499,673 | 563,563 | 633,599 |
| Percent Capacity                        |         | 65%     | 74%     | 83%     | 94%     | 106%    | 119%    |
| Operations Over 100% Capacity           |         |         |         |         |         | 30,522  | 100,558 |
| <b>Regional Service</b>                 |         |         |         |         |         |         |         |
| Harvey Field                            | 230,000 | 139,160 | 156,790 | 173,950 | 193,091 | 214,556 | 237,636 |
| Percent Capacity                        |         | 61%     | 68%     | 76%     | 84%     | 93%     | 103%    |
| Operations Over 100% Capacity           |         |         |         |         |         |         | 7,636   |
| <b>Commercial Service/Seaplane Base</b> |         |         |         |         |         |         |         |
| Kenmore Air Harbor, Inc.                | 56,250  | 57,000  | 65,950  | 71,250  | 75,150  | 78,950  | 83,300  |
| Percent Capacity                        |         | 101%    | 117%    | 127%    | 134%    | 140%    | 148%    |
| Operations Over 100% Capacity           |         | 750     | 9,700   | 15,000  | 18,900  | 22,700  | 27,050  |

**Exhibit ES-15: Airports at 60 Percent Capacity by 2030**

|                             | ASV     | 2005    | 2010    | 2015    | 2020    | 2025    | 2030    |
|-----------------------------|---------|---------|---------|---------|---------|---------|---------|
| <b>Commercial Service</b>   |         |         |         |         |         |         |         |
| Friday Harbor               | 138,000 | 65,457  | 70,941  | 76,931  | 83,462  | 90,643  | 98,450  |
| Percent Capacity            |         | 47%     | 51%     | 56%     | 60%     | 66%     | 71%     |
| Reserve Operations          |         | 72,543  | 67,059  | 61,069  | 54,538  | 47,357  | 39,550  |
| Spokane International       | 215,000 | 91,354  | 101,837 | 115,397 | 128,004 | 139,691 | 151,298 |
| Percent Capacity            |         | 42%     | 47%     | 54%     | 60%     | 65%     | 70%     |
| Reserve Operations Capacity |         | 123,646 | 113,163 | 99,603  | 86,996  | 75,309  | 63,702  |
| <b>Regional Service</b>     |         |         |         |         |         |         |         |
| Arlington Municipal         | 270,000 | 148,540 | 164,855 | 183,178 | 197,261 | 211,853 | 227,208 |
| Percent Capacity            |         | 55%     | 61%     | 68%     | 73%     | 78%     | 84%     |
| Reserve Operations Capacity |         | 121,460 | 105,145 | 86,822  | 72,739  | 58,147  | 42,792  |
| Auburn Municipal            | 231,000 | 143,450 | 150,063 | 155,872 | 160,888 | 165,126 | 169,949 |
| Percent Capacity            |         | 62%     | 65%     | 67%     | 70%     | 71%     | 74%     |
| Reserve Operations Capacity |         | 87,550  | 80,937  | 75,128  | 70,112  | 65,874  | 61,051  |
| Olympia                     | 230,000 | 89,527  | 107,683 | 127,917 | 141,493 | 155,610 | 170,785 |
| Percent Capacity            |         | 39%     | 47%     | 56%     | 62%     | 68%     | 74%     |
| Reserve Operations          |         | 140,473 | 122,317 | 102,083 | 88,507  | 74,390  | 59,215  |
| Snohomish Co./Paine Field   | 316,218 | 150,368 | 160,528 | 172,020 | 181,028 | 189,854 | 199,783 |
| Percent Capacity            |         | 48%     | 51%     | 54%     | 57%     | 60%     | 63%     |
| Reserve Operations Capacity |         | 165,850 | 155,690 | 144,198 | 135,190 | 126,364 | 116,435 |
| <b>Recreation/Remote</b>    |         |         |         |         |         |         |         |
| Crest Airpark               | 240,000 | 146,250 | 151,200 | 155,250 | 157,950 | 160,200 | 162,450 |
| Percent Capacity            |         | 61%     | 63%     | 65%     | 66%     | 67%     | 68%     |
| Reserve Operations Capacity |         | 93,750  | 88,800  | 84,750  | 82,050  | 79,800  | 77,550  |
| <b>Seaplane Base</b>        |         |         |         |         |         |         |         |
| Kenmore Air Harbor SPB      | 60,000  | 31,200  | 39,300  | 42,500  | 43,900  | 45,300  | 46,700  |
| Percent Capacity            |         | 52%     | 66%     | 71%     | 73%     | 76%     | 78%     |
| Reserve Operations Capacity |         | 28,800  | 20,700  | 17,500  | 16,100  | 14,700  | 13,300  |

## Passenger Terminal Capacity

*Six airports are either currently or expected to exceed their peak hour passenger capacity by 2030 – expansions required at other airports not significant compared to Sea-Tac*

Passenger terminal capacity is a measure of how many passengers can be processed through an airport’s terminal facilities during peak periods of activity while maintaining an acceptable level of customer service and convenience. The passenger terminal capacity findings for Washington State are summarized below.

- The analyses determined that six airports are expected to exceed their peak hour passenger capacity by 2030. The projected passenger terminal expansion requirements for these airports are presented in Exhibit ES-16. The six airports include:
  - Anacortes
  - Kenmore Air Harbor, Inc.
  - Kenmore Air Harbor Seaplane Base
  - Orcas Island
  - Seattle-Tacoma International
  - Tri-Cities

**Exhibit ES-16: Passenger Terminal Expansion Requirements**

| Airport                  | 2005 Terminal Peak Hr Capacity | 2005                 |                          | 2030                 |                          | Add'l Terminal Area Required (sq. ft.) |
|--------------------------|--------------------------------|----------------------|--------------------------|----------------------|--------------------------|--|
|                          |                                | Peak Hour Passengers | Capacity Utilization (%) | Peak Hour Passengers | Capacity Utilization (%) |  |
| Anacortes                | 9                              | 9                    | 100%                     | 32                   | 350%                     | 4,025                                  |
| Kenmore Air Harbor, Inc. | 8                              | 8                    | 100%                     | 13                   | 161%                     | 875                                    |
| Kenmore Air Harbor SPB   | 8                              | 8                    | 100%                     | 13                   | 161%                     | 875                                    |
| Orcas Island             | 7                              | 7                    | 100%                     | 11                   | 153%                     | 700                                    |
| Seattle-Tacoma Int'l     | 8,065                          | 4,800                | 68%                      | 10,274               | 127%                     | 386,575                                |
| Tri-Cities               | 271                            | 185                  | 68%                      | 313                  | 115%                     | 7,350                                  |

- With the exception of Seattle-Tacoma International, the passenger terminal expansions required at those airports exceeding their 2030 peak hour passenger capacities are not significant and it is assumed that the required expansion can be accommodated within the existing airport footprint.
- By 2030, four additional airports are forecast to exceed the 60 percent threshold at which planning for terminal expansion should begin. These airports include:
  - Pangborn Memorial
  - Friday Harbor
  - Pullman/Moscow Regional
  - Spokane International
- Bellingham International is operating above its capacity due to recent service increases that have occurred since 2006.
  - The LATS forecast base year, 2005, preceded Bellingham’s rapid passenger growth in 2006 and 2007. The LATS capacity analysis therefore does not identify Bellingham as reaching terminal capacity.
  - Studies done by the Port of Bellingham to address this issue, however, have revealed that the airport will need passenger terminal expansion by 2009.

*Bellingham is also operating above its terminal capacity due to recent service increases*

### ***Aircraft Storage Capacity***

There were approximately 8,000 general aviation aircraft based in Washington State in 2005. In order to facilitate access and efficient use of the aviation system, these aircraft must be stored in locations that are both safe and convenient when the aircraft are not in use. This requires aircraft storage facilities at airports across the state. There are generally two types of aircraft storage – tiedowns and hangars. The aircraft storage capacity findings for Washington State are as follows.

- As of 2005, aircraft storage capacity in Washington State totaled 9,772 positions, of which 4,503 were aircraft tiedown positions, and 5,314 were hangar units. With 7,962 aircraft based in the state, the statewide airport system had reached 83 percent of its existing aircraft storage capacity.
- Aircraft parking and storage is generally constructed “on demand”, such that tiedown positions and aircraft hangars are constructed only in response to visible demand.

*There are several individual airports throughout the state which are expected to have aircraft storage capacity shortfalls.*

- As a whole, the Washington State airport system is expected to have adequate long-term aircraft storage capacity. The system is expected to be 29 percent utilized by 2015 and 36 percent utilized by 2030. However, there are many individual airports throughout the state which are expected to have aircraft storage capacity shortfalls.
- Approximately one-quarter (36 of 138) of Washington State airports are expected to experience aircraft storage constraints by 2030. These airports are listed by region in Exhibit ES-17. The additional land area required to meet the 2030 storage demand is also indicated.

**Exhibit ES-17: Airports Exceeding Aircraft Storage Capacity by 2030**

|                                     | 2030 Demand | 2030 Capacity | 2030 Utilization (%) | Add'l Land Needed to Meet Excess Demand (in Acres) <sup>1</sup> |
|-------------------------------------|-------------|---------------|----------------------|---|
| <b>North Central RTPO</b>           |             |               |                      |   |
| Cashmere Dryden                     | 88          | 43            | 205%                 | 3.8   |
| Chelan Municipal                    | 115         | 51            | 225%                 | 5.3   |
| Lost River Resort                   | 3           | 1             | 300%                 | 0.2   |
| Methow Valley                       | 20          | 19            | 105%                 | 0.1   |
| Tonasket Municipal                  | 18          | 12            | 150%                 | 0.5   |
| Twisp Municipal                     | 43          | 38            | 113%                 | 0.4   |
| <b>Northeast Washington RTPO</b>    |             |               |                      |   |
| Colville Municipal                  | 111         | 20            | 555%                 | 4.2   |
| <b>Palouse RTPO</b>                 |             |               |                      |   |
| Port of Whitman Bus. Air Center     | 105         | 11            | 955%                 | 7.8   |
| Pullman/Moscow Regional             | 105         | 94            | 112%                 | 0.9   |
| <b>Peninsula RTPO</b>               |             |               |                      |   |
| Sanderson Field                     | 219         | 21            | 1043%                | 18.3  |
| Sequim Valley                       | 41          | 35            | 117%                 | 0.5   |
| Forks Municipal                     | 30          | 17            | 176%                 | 1.1   |
| <b>Puget Sound Regional Council</b> |             |               |                      |   |
| Boeing Field/King County Int'l      | 1,410       | 479           | 294%                 | 75.6  |
| Crest Airpark                       | 451         | 325           | 139%                 | 10.5  |
| Firstair Field                      | 105         | 87            | 121%                 | 1.5   |
| Kenmore Air Harbor Inc.             | 138         | 0             |                      | 11.5  |
| Renton Municipal                    | 436         | 397           | 150%                 | 3.3   |
| Seattle-Tacoma International        | 15          | 4             | 375%                 | 0.9   |
| Seattle Seaplane Base               | 4           | 3             | 133%                 | 0.1   |
| Sky Harbor                          | 5           | 0             | --                   | 0.4   |
| Swanson Field                       | 25          | 21            | 119%                 | 0.3   |
| Shady Acres                         | 43          | 36            | 119%                 | 0.6   |
| Vashon Municipal                    | 60          | 50            | 120%                 | 0.8   |
| <b>Quad County RTPO</b>             |             |               |                      |   |
| Davenport Municipal                 | 31          | 21            | 148%                 | 0.8   |
| Wilbur Municipal                    | 23          | 20            | 115%                 | 0.3   |
| <b>San Juan Islands</b>             |             |               |                      |   |
| Orcas Island                        | 200         | 101           | 198%                 | 8.3   |
| <b>Skagit/Island RTPO</b>           |             |               |                      |   |
| Whidbey Airpark                     | 33          | 0             | --                   | 2.8   |
| <b>Southwest Washington RTC</b>     |             |               |                      |   |
| Goldendale Municipal                | 51          | 16            | 319%                 | 2.9   |
| Goheen Field                        | 141         | 87            | 162%                 | 4.5   |
| Pearson Field                       | 281         | 154           | 182%                 | 10.6  |

- continued -

|                                  | 2030 Demand | 2030 Capacity | 2030 Utilization (%) | Add'l Land Needed to Meet Excess Demand (in Acres) <sup>1</sup> |
|----------------------------------|-------------|---------------|----------------------|---|
| <b>Southwest Washington RTPO</b> |             |               |                      |   |
| Packwood                         | 6           | 2             | 300%                 | 0.3   |
| Willapa Harbor                   | 5           | 0             | --                   | 0.4   |
| Woodland State                   | 23          | 20            | 115%                 | 0.3   |
| <b>Spokane RTC</b>               |             |               |                      |   |
| Cross Winds                      | 3           | 2             | 150%                 | 0.1   |
| Felts Field                      | 565         | 310           | 182%                 | 21.3  |
| <b>Thurston RPC</b>              |             |               |                      |   |
| Western Airpark                  | 79          | 0             | --                   | 6.6   |
| <b>Whatcom COG</b>               |             |               |                      |   |
| Blaine Municipal                 | 49          | 35            | 140%                 | 1.2   |
| Lynden Municipal                 | 49          | 15            | 327%                 | 2.8   |
| <b>Yakima Valley COG</b>         |             |               |                      |   |
| Sunnyside Municipal              | 16          | 14            | 114%                 | 0.2   |

Note: <sup>1</sup>Additional land area requirement calculated at the rate of 12 aircraft storage positions/acre.

### ***Air Cargo Capacity in Washington State***

The air cargo analysis identified 15 Washington airports with some level of air cargo activity, although over 98 percent of statewide cargo tonnage was processed through three facilities: Seattle-Tacoma International, Boeing Field/King County International and Spokane International. Key findings concerning air cargo facilities in Washington State are presented below.

- Air cargo companies build facilities when they are needed.
- Facility expansion occurs as demand grows.
- Excess capacity seldom exists.
- Availability of aircraft parking apron is often the key determinant of an airport's ability to serve air cargo.
- Key factors influencing future growth are geographic location and apron/land availability.
- Availability of off-airport properties for cargo processing facilities provide a way around limitations on developable land at airports.

*Over 98 percent of statewide cargo tonnage is handled at three airports: Sea-Tac, Boeing Field, and Spokane*

Additional airport-specific findings were developed for the top three cargo airports noted above.

*Off-airport facilities may help to solve future limitations in available airport land at Sea-Tac and Boeing Field*

- The analysis found that both Seattle-Tacoma International and Boeing Field/King County International are at or above 60 percent cargo capacity. The availability of off-airport cargo processing facilities may be an important determinant in the need for new or additional on-airport facilities.
- The analysis found no evidence of constraints to air cargo activity at other Washington system airports.
- A study of air cargo in the Puget Sound Region was completed by the Puget Sound Regional Council (PSRC) in 2006. The PSRC study addressed air cargo activity within the region and specifically at Seattle-Tacoma International and Boeing Field/King County International airports. This study provides a comprehensive strategy for dealing with future air cargo needs in the Puget Sound Region.

### **Airspace Analysis**

Airspace capacity analysis is primarily an FAA function as stated in Advisory Circular 150/5070-7 (507.b.2). Resolution of airspace conflicts are systematic in nature and handled by the FAA. As a result, the State has limited influence in this area. The airspace analysis conducted during LATS addressed airspace associated with Washington's public use airports to determine areas where airspace interactions or overlaps occur. Additionally, the analysis examined whether such interactions or overlaps need to be addressed when analyzing future system improvements.

Major findings from the airspace analysis are summarized below.

*No significant airspace overlaps occur outside of the Puget Sound Region*

- No significant airspace overlaps occur outside of the Special Emphasis Regions.
- The majority of overlaps occur within the Puget Sound Special Emphasis Region where population is the greatest.
- Airspace within Washington State is subject to overlap from airports outside of the state. More specifically, airports in Southwest Washington are affected by Portland International Airport.
- Seattle-Tacoma International and Boeing Field/King County International show the biggest airspace overlap in terms of potential operational conflict. As such, their proximity requires flight path coordination between the two airports.

*The biggest airspace overlap in terms of potential operational conflict occurs between Sea-Tac and Boeing Field*

- Further study of airspace capacity and available technologies is needed to address future demand anticipated for the Central Puget Sound area. Such a study would fall under the purview of the FAA.

## **High Speed Rail Findings**

LATS also conducted a high-speed rail assessment to determine whether rail system improvements could alleviate forecast capacity constraints at Washington airports. High-speed rail could provide relief to the Washington State aviation system in one of two ways:

- Providing a viable alternative to flying between certain city pairs (and thus help mitigate aviation demand levels)
- Providing improved airport access and connectivity to nearby airports as Seattle-Tacoma International reaches passenger capacity.

Three intercity passenger rail lines currently provide service to Washington State:

1. Amtrak Coast Starlight Service;
2. Amtrak Empire Builder Service; and
3. Amtrak Cascades Service.

Exhibits ES-18, ES-19 and ES-20 below provide a visual representation of the regions these rail lines serve.

### Exhibit ES-18: Amtrak Coast Starlight Service



Source: Amtrak.com (accessed March 2007)

### Exhibit ES-19: Amtrak Empire Builder Service



Source: Amtrak.com (accessed March 2007)

### Exhibit ES-20: Amtrak Cascades Service



Source: Amtrak.com (accessed March 2007)

The key findings from the high-speed rail assessment are as follows:

- High-speed rail is not an adequate option for relieving airport congestion.
  - Analysis results showed that feasible high-speed systems will not alleviate airport congestion levels by a significant amount, even though high-speed ground transportation systems offer the potential to enhance the mobility of Washington residents and visitors traveling between the state's cities and other nearby cities and activity centers in Washington, Oregon, and British Columbia.
  - Intercity passenger rail service in Washington State is currently limited to state-supported Amtrak Cascades service between Vancouver (BC), Seattle, Portland (OR), and Eugene (OR) and nominal Amtrak east-west service on long-distance oriented trains.
- Improvements to intercity rail service are limited by rail network capacity.
  - Potential future improvements in intercity rail service are limited by the state's rail network capacity issues, particularly for east-west routes, and by the geographic distances between major population centers.
  - The Department of Transportation has developed an ambitious long-range plan for service improvements in the Amtrak Cascades corridor. The proposed improvements are projected by the Department to attract significantly more riders than the current service, and the LATS ridership analyses generally support these forecasts. However, the number of Seattle-Tacoma International passengers diverted to the improved rail system represents only a very small percentage of the overall number of air passengers that will use the airport.
- Rail service levels are not sufficient to shift airport choice patterns.
  - Even though the Amtrak Cascades Corridor improvements, coupled with ongoing transit improvements in Vancouver (BC), Seattle, and Portland (OR), will provide for potential improvements in air-rail connectivity and in passengers' abilities to use alternative airports, the service levels that will be offered will not be sufficiently superior to existing auto based airport access options to produce significant shifts in airport choice that will not otherwise occur with a congested aviation system.

*High speed rail will not alleviate airport congestion by a significant amount*

*Due to limited capacity on intercity rail service, passengers diverted from Sea-Tac remain a small percentage of overall passengers*

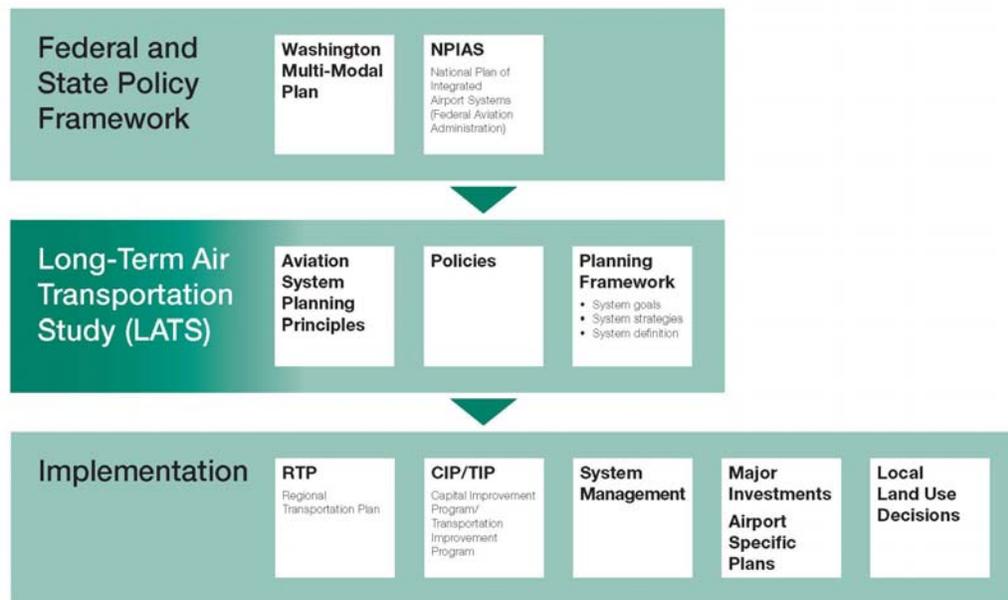
*Rail service levels are not sufficiently superior to driving – passengers will likely continue to drive to their current airport of choice*

## LATS Policy Recommendations

*Policy recommendations were developed to help guide the Washington aviation system*

A primary responsibility of the Washington State Aviation Planning Council was to develop a series of policy recommendations for the state's aviation system. These policies are intended to guide decisions regarding how best to meet Washington's long-term aviation needs. As shown in Exhibit ES-21, proposed policies for the Washington State aviation system will be considered in the context of the State Transportation Goals, the Washington Transportation Plan, and Federal Aviation Administration guidance.

### Exhibit ES-21: Washington Aviation System Planning Hierarchy



*The Council's policy recommendations are based on a series of Guiding Principles*

To provide the framework for developing specific policy recommendations, the Aviation Planning Council first adopted a series of nine Guiding Principles. The Guiding Principles represent assumptions intended to direct state policy in all aspects of its aviation programs. These Guiding Principles are presented below.

1. Washington's aviation system is an essential component of local, state and national economies and must be sustained. Washington's communities depend on their ability to access Washington State's aviation system to move people and goods safely throughout the state, nation, and world.
2. Washington State's aviation system includes commercial aviation and general aviation airports and supporting businesses and facilities, the aerospace industry and airspace. Furthermore,

decisions about Washington's aviation system should be considered in the context of local, state, national and international impacts.

3. It will take strong partnerships to effectively address the challenges facing Washington's aviation system between airports, the aviation industry, business community, local, regional and tribal government, educational institutions, Washington State, and the Federal Aviation Administration.
4. To safeguard Washington State's aviation system for future generations, the state must address multiple challenges in a timely manner including: capacity exacerbated by growing demand, delayed maintenance, incompatible land use, funding, work force, and the special needs of small communities.
5. Though Washington's aviation system provides significant economic benefit to the State, it currently suffers from a significant funding shortfall leading to deferred maintenance that will cost even more to address over the long run. As a component of the overall transportation system within the state, funding mechanisms must be considered and funding sources identified which equitably take into account the revenue and benefit derived from aviation activities.
6. The public investment in the aviation system can be maximized by first making the best use of our current assets. Enhancement and expansion of the system must consider environmental and social impacts upon communities and the state.
7. The decision-making about the expansion or siting of airports should be made through an open and public process, taking into account the ultimate need to serve the broadest long term interest of the residents of Washington State and our national security.
8. Washington's aviation system should be planned to coordinate with other transportation modes to assure effective, efficient, and complementary transportation options for people and goods.

The decision-making about the expansion or siting of airports should be made through an open and public process, taking into account the ultimate need to serve the broadest long term interest of the residents of Washington State and our national security.

These Guiding Principles provide the foundation for the specific aviation policy recommendations developed by the Aviation Planning Council. The policy recommendations are related to the following seven key areas:

*Policy recommendations  
have been developed for  
seven key areas*

- **Capacity:** Policy recommendations focus on the State's role in ensuring the capability of the statewide aviation system to meet future operations demand. Where demand is anticipated to exceed system capacity, recommendations are made as to additional actions that may be needed to maintain and/or expand the system.
- **Land Use:** These policy recommendations address the need to protect airports from encroachment by development of incompatible uses in the airport vicinity. The policies address regulation of incompatible land uses as well as airspace intrusions at both the State and local levels.
- **Environment:** The Environmental policies address a range of issues, from mitigating adverse impacts to wildlife protection, energy conservation, alternative fuels and waste reduction.
- **Safety:** The need for aviation system safety is addressed through policy recommendations on the application of design criteria and safety standards, instrumentation and weather reporting, as well as identification of airports critical to the Washington Comprehensive Emergency Management Plan.
- **Stewardship:** Proposed stewardship policies address issues including but not limited to maintenance of the State's system plan, capital investment and funding, technical assistance to airports and the potential for public/private partnerships.
- **Economy:** Policies relevant to the economy address airports not only as supporting the economic growth of the State, but also the need of the State to support airports through investment in aviation infrastructure and education.
- **Mobility:** The Mobility policies stress the importance of the aviation system as an integral part of Washington's overall transportation infrastructure. Washington airports link the State to the national air transportation system. Federal, state, regional and local transportation agencies need to be involved in the planning and development of an integrated transportation system.

## **Policy Recommendations of the Aviation Planning Council**

The specific policy recommendations developed by the Washington State Aviation Planning Council within each key area are presented below.

### ***Capacity***

1. The State of Washington must take a lead role in addressing its long-term aviation system capacity needs from a system-wide and regional perspective.
2. Washington State shall place a funding and planning priority on maximizing the efficiency and utility of the existing aviation system before creating new airports.
3. If Washington State's existing system cannot provide sufficient aviation capacity to meet existing and future demand and no sponsor has expressed interest, the state will be given the authority to undertake a site selection process for a new airport.

### ***Land Use***

1. Washington State should strengthen legislation to define and prohibit incompatible land uses and promoting appropriate land uses adjacent to public use airports.
2. Washington State should use a combination of incentives, legislation and regulatory tools to ensure that local governments address land use requirements to protect airports as essential public facilities, discouraging the encroachment of incompatible land uses adjacent to public use airports.
3. Washington State should develop performance measures to assess how well local governments and local comprehensive plans and policies discourage incompatible development adjacent to public use airport.
4. The State should prohibit airspace intrusion around airports and runway approach paths by structural, visual, or wildlife hazards that could potentially impact airport operations or endanger the safety and welfare of aviation users.
5. Regional Transportation Planning Organizations should be given the authority to certify the transportation and land use element of local comprehensive plans discouraging incompatible development adjacent to public use airports and ensuring

consistency of comprehensive plan components and regulations across jurisdictional boundaries.

6. Washington State should develop standards discouraging new development of K-12 public schools, daycare centers and medical facilities from locating adjacent to public use airports.
7. Washington State should require that airport sponsors and local jurisdictions coordinate with each other during the development and amendment of airport master plans and comprehensive plans/development regulations.

### ***Environment***

1. Washington State should require airports to appropriately mitigate adverse environmental impacts to threatened and endangered species and habitats occurring at airports, while reducing wildlife attractants that create hazards to airport operations.
2. Washington State should encourage sustainable environmental and energy best management practices in design and operation of airport facilities, consistent with state and federal law.
3. Develop statewide and regional strategies to coordinate, develop and provide a range of transportation mode options for access to public use airports through airport and highway design projects.

### ***Safety***

1. Washington State should use incentives, including state and federal resources to ensure that airport facilities meet applicable federal or state design criteria and safety standards.
2. The Washington State Aviation System Plan should identify strategic aviation facilities to support the Washington Comprehensive Emergency Management Plan.
3. Washington State should encourage and support precision instrument approach procedures at all airports with a classification service role of “Regional Service Airport” or higher, and non-precision instrument approach procedures at all airports with a service role of “Community Service Airport” or higher.

### ***Stewardship***

1. The Washington State Airport Classification System will guide decisions on future aviation system needs and investments.

2. Washington State should work with the FAA and regional transportation planning organizations to identify additional airports that can meet federal criteria for classification as reliever airports between 2008 and 2035.
3. Update the Washington Aviation System Plan (WASP) to include the following:
  - a. Incorporate economic development studies, aviation forecasts, pavement conditions analysis, capacity analysis, airport facility assessment studies and other studies as appropriate to keep the system plan up-to-date to meet changing conditions in the air transportation system.
  - b. During each System Plan update, review the progress toward achievement and relevance of the policies recommended by the Aviation Planning Council.
  - c. Maintain a relational database, including physical and operational airport inventory information to support Aviation System Planning and the statewide aviation capital investment program.
4. Washington State should ensure that the aviation capital investment program strategically prioritizes system investments necessary to provide for the state's air transportation system needs in a cost-effective manner.
5. In order to provide funding for preservation and necessary development of the aviation system, the State shall return a portion of the general fund revenue generated by aviation system activity to the Department of Transportation Aviation Division for support of such improvements.
6. Where gaps exist in the aviation system it may be in the State's interest to own, operate, or develop airports.
7. The regional transportation planning process should be coordinated with the aviation system plan and local airport master plans to maximize the net public benefit.
8. It is in the state's interest to implement airport grant terms and conditions that will preserve and protect the State's investments in the system.

9. The WASP should encourage efficient airspace by actions including working with the FAA and investing in facilities and technologies.

### ***Economy***

1. Washington State should consider state, regional, or national outcomes in the analyses of aviation investments and policy recommendations.
2. Washington State should encourage and support education infrastructure to train and educate the skilled workforce necessary to support aviation.
3. Washington State should work with state and local economic development agencies to support adequate aviation capacity, service and facilities to support economic growth.

### ***Mobility***

1. Washington's aviation facilities should be planned and developed as an integrated system that meets statewide air transportation demand; complements the overall state transportation system; maximizes the use of existing facilities; and is compatible with the environment.
2. Promote adequate access to the national air transportation system for all Washington residents, using adopted standards of the Washington State Airport Classification System.
3. Washington State should identify transportation needs that extend into adjacent states and promote bi-state/multi modal cooperative solutions to ensure coordinated services and maximum cost effectiveness.
4. Washington State should coordinate with federal, state, regional and local transportation agencies to encourage effective ground access to airports through various modes of transportation, freight/cargo efficiencies and rail and road enhancement projects.