Washington State

Aviation Planning Council

Long-Term Air Transportation Study (LATS)

December 4, 2008

Spokane Doubletree Hotel
Spokane, WA

Meeting Objectives

- Review public input on alternative strategies and options
- Preliminary definition of preferred strategic investment option
- Discuss potential legislative recommendations
- Council reviews existing statewide aviation funding issues and potential funding strategies

Council Work Program

Project Timeline

	2008												2009				
	Stage I				Stage 2		Stage 3		Stage 4				Stage 5				
Month	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar		Apr	May	Jun
Activity	(1) Meeting	(2) Workshop	(3) Workshop	(4) Workshop	(5) Meeting	*Regional Meetings	(6) Workshop		(7) Meeting		(8) Meeting		(9) Workshop	*Online Survey	*Regional Meeting		(10) Meeting	
Location	Seattle	Seattle	Seattle	Seattle	Spokane	Everett/ Wenatchee	Vancouver		Seattle		Spokane		TriCities	Statewide	Vancouver TriCities		Seattle	

Public Outreach and Participation Throughout the Project
(Media Releases, Web Page, Regional Meetings, Stakeholder Briefings, Electronic Town Hall, Online Survey, E-News Briefings, etc…)

Stage 1
Identify Issues Challenges & Opportunities

February 2008

Stage 2
Policy Development

June 2008

Stage 3
Identify Investment Alternatives & Criteria

August 2008

Stage 4
Analyze Investment Alternatives

October 2008

Stage 5
Draft Aviation System Plan & Recommendations

February 2009

Final System Plan & Recommendations to the Governor

July 2009

Note: Aviation Council meetings and workshops numbers ( ) listed above correspond with the attached work program. Scheduled regional meetings together with the E-Townhall meetings through Knowledge Network are scheduled to occur twice during the study period. Regional meetings will be held on the east and the west side of the state.

Strategic Investment Strategies

John Yarnish

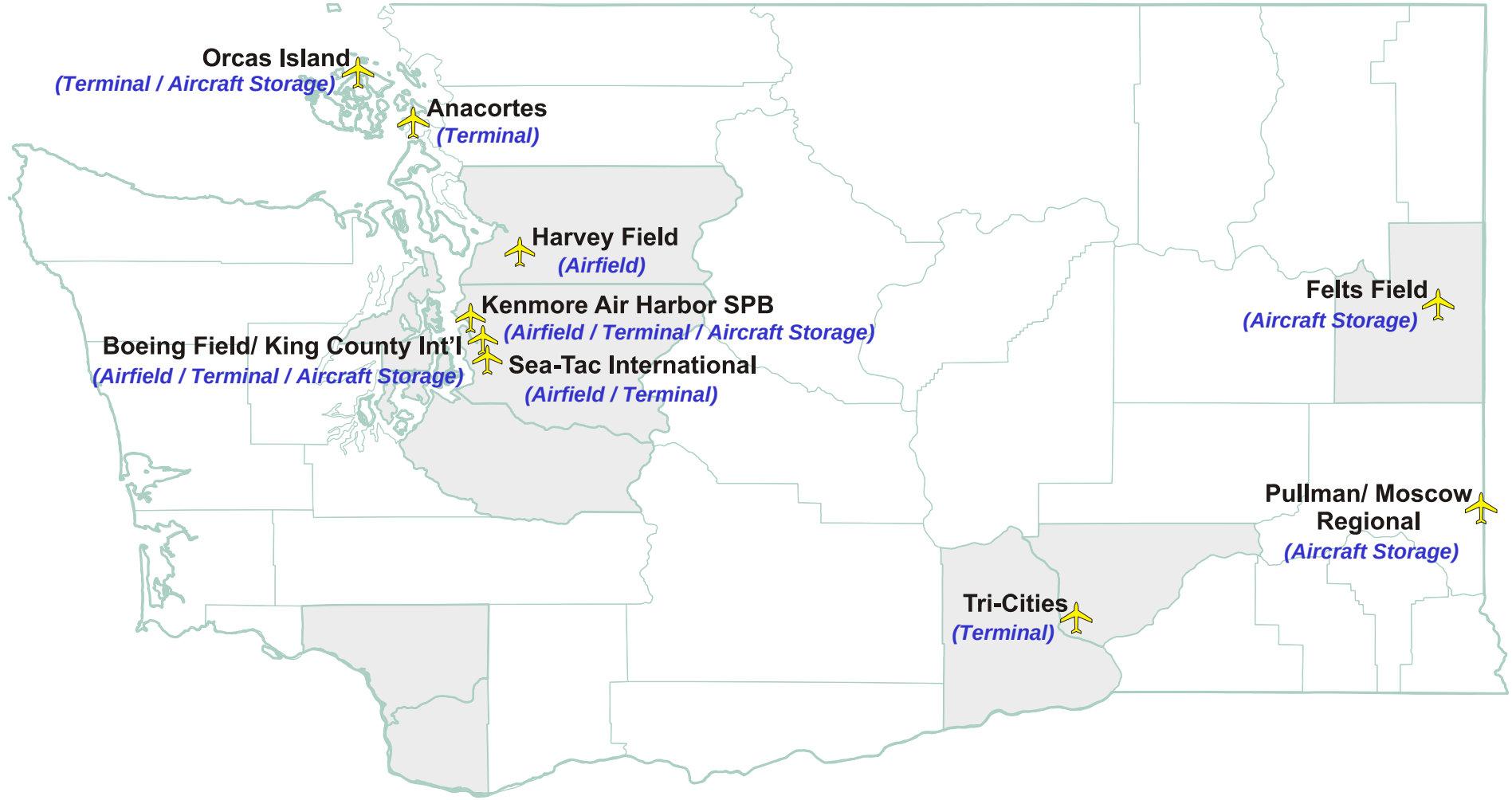
Approach

1. **Implementation framework**
2. **Identify key issues**
3. **Identify the range of alternatives**
4. **Evaluate alternatives**
5. **Action/Implementation Strategy**

Issues Identified in LATS

- There are significant deficiencies in airport capacity (Airfield, Terminal, Air Cargo, Aircraft Storage And Airspace) within the Puget Sound Region. Most of the rest of the State has adequate capacity
- Commercial service to small communities in the State is continuing to erode
- Privately owned Public Use Airports are especially vulnerable to closure and lack access to funding for improvements
- Land use compatibility protection is inadequate at many airports
- Many airport facilities and services across the State do not meet Performance Objectives that are appropriate for their airport classifications
- Many airports lack all-weather access (instrument approaches) that are necessary to provide access and for economic vitality.

Nine Commercial/Regional Service Airports Will Exceed Airfield, Terminal, and/or Aircraft Storage Capacity by 2030



Roles and Responsibilities

- FAA
- WSDOT Aviation
- Regional Agencies (RTPOs, RPCs, RTCs, COGs)
- Local Jurisdictions
- Airport Sponsors
- Private Sector
- General Public

Roles and Responsibilities

WSDOT Aviation	Other Partners
■ Stewardship of state aviation system ■ Technical assistance to airports, cities, counties, regional agencies ■ Search and rescue operations ■Review local land use regulations for compliance with state criteria ■Administer the state grant program	**FAA—** steward of national system, airspace and safety **Regional Agencies (RTPOs, RPCs, RTCs, COGs)–** consistency with regional and state planning **Local Jurisdictions–** local transportation and land use planning, and local infrastructure **Airport Sponsors–** airport operations, maintenance and planning **Private Sector–** meets service demands

Distribution of Airports by State 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 based aircraft and 4,000-foot long runway, with exceptions
Community Service	23	Serves a community; has at least 20 based aircraft; paved runway
Local Service	33	Serves a community; has fewer than 20 based aircraft; paved runway
Recreation or Remote	39	Other land-based airports, including residential airparks
Seaplane Bases	9	Identified by FAA as a seaplane base, unless it is a Commercial Service Airport

Different Performance Objectives for Different Airport Classifications

	Objective	Commercial Service	Regional Service	Community Service	Local Service	Recreation or Remote	Seaplane Base
Operational Factors	Standard runway safety area	X	X	X	X	X	NA
	Runway PCI 75	X	X	X	X	X	NA
	Taxiway PCI 70	X	X	X	X	X	NA
	Apron PCI 70	X	X	X	X	X	NA
	No obstacles in threshold siting surface	X	X	X	X	X	X
	No obstacles in obstacle free zone	X	X	X	X	X	X
Plan	Planning documents less than 7 years old	X	X	X	X	X	X
Land Use Compatibility Protection	Compatibility policies in comprehensive plan	X	X	X	X	X	X
	Appropriate zoning designation for airport	X	X	X	X	X	X
	Land use controlled in runway protection zones	X	X	X	X	X	X
	Height hazard zoning or regulations	X	X	X	X	X	X
	Zoning discourages incompatible development	X	X	X	X	X	X
Facilities	Runway Length	5,000 feet	5,000 feet	3,200 feet	2,400 feet	No objective	No objective
	Taxiway	Parallel	Parallel	Parallel	Turn-around	Turn-around	No objective
	Instrument Approach	Lower than ¾ mile visibility minimum	Lower than ¾ mile visibility minimum	1 mile visibility minimum	No objective	No objective	No objective
	Lighting	Medium intensity	Medium intensity	Medium intensity	Low intensity	Reflectors	NA
	Visual Glide Slope Indicators	X	X	X	X	No objective	NA
	Weather Reporting	AWOS or ASOS	AWOS or ASOS	Super-Unicom	No objective	No objective	No objective
	Dock Facility	NA	NA	NA	NA	NA	Yes
Services	Fuel Sales	Jet A and 100LL	Jet A and 100LL	100LL	No objective	No objective	No objective
	Maintenance Service	Major	Major	Minor	No objective	No objective	No objective

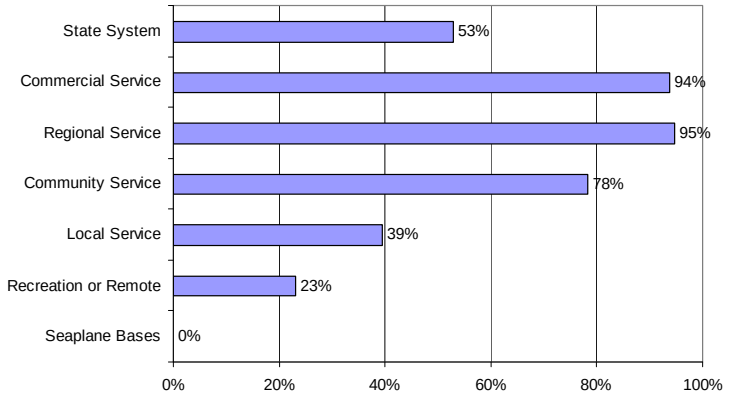
Airport Classifications and Performance Highlights

- **GENERAL. Classifying airports by system role and setting performance objectives for classifications can help prioritize airport investments to achieve access, preservation, safety, and other goals.**
- **ACCESS. Washington's residents have good airport access, but more airports need to have all-weather (instrument) capabilities.**
- **PRESERVATION. Airport pavement preservation has been far more successful than airport preservation (land use compatibility).**
- **SAFETY. Smaller airports are less successful at meeting safety objectives than larger airports.**

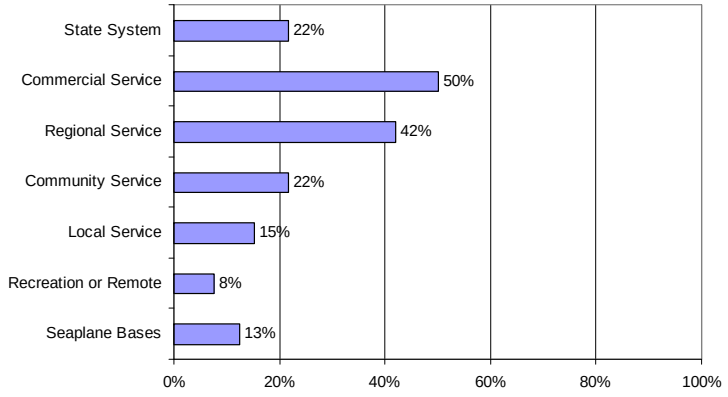
What Are the Issues with Land Use Protections?

- **Compliance with nearly all the land use objectives is noticeably lower than in other measures.**
- **Only 35 percent of airports are protected by comprehensive plan policies.**
- **Only 22 percent of airports are protected by zoning ordinances.**
- **53 percent of airports have Height Hazard Controls.**

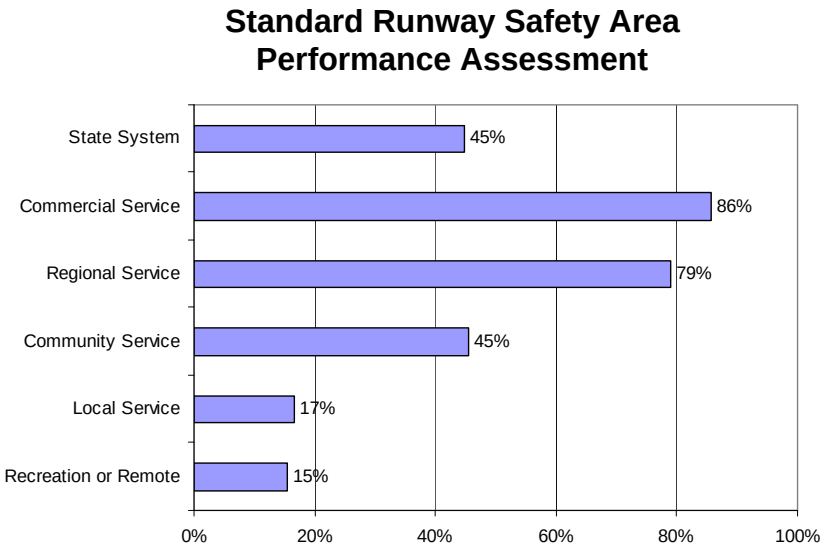
Height Hazard Control Performance Assessment

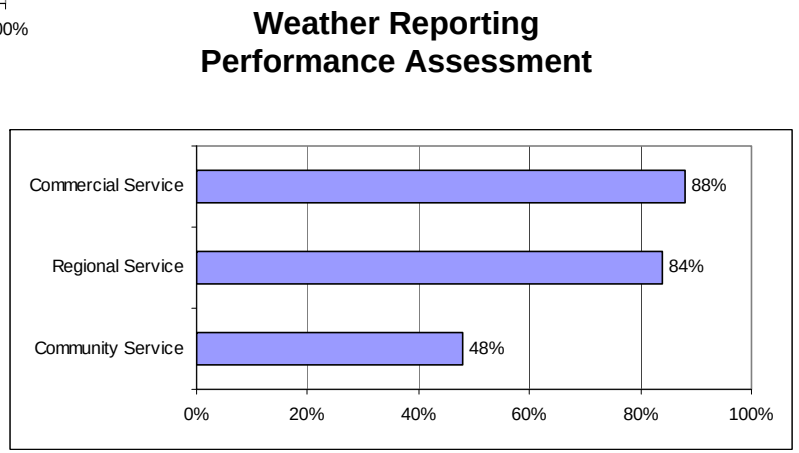


Compatibility Control by Zoning Performance Assessment



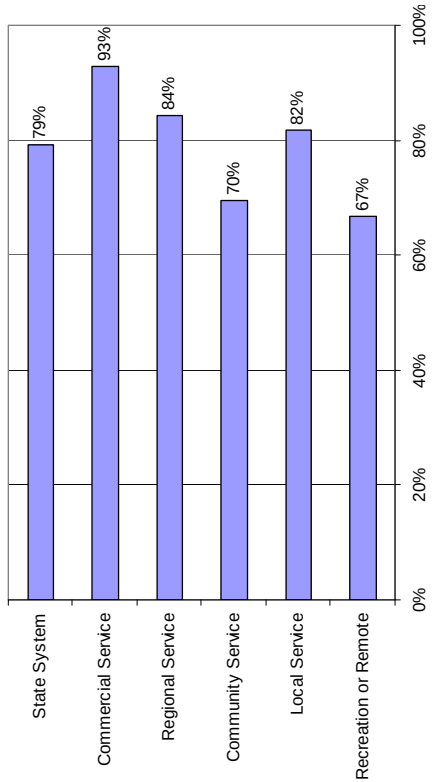
How do the Airports Comply with Other Performance Objectives Concerned with Safety?



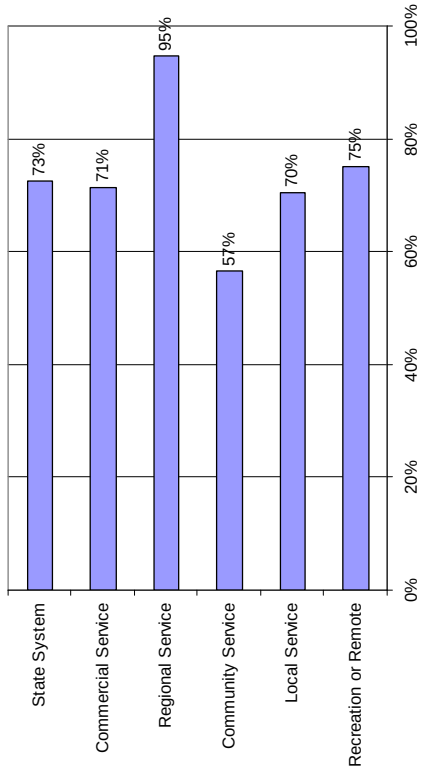


How Do the Airports' Pavement Condition Compare to the Performance Objectives?

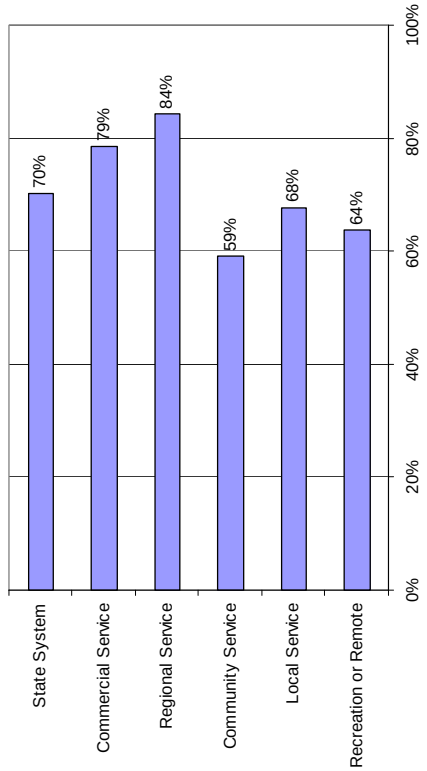
Runway Pavement Condition Performance Assessment



Taxiway Pavement Condition Performance Assessment



Apron Pavement Condition Performance Assessment



How Do the Airports Comply with the Instrument Approach Procedures Objective?

- **Commercial Service – 63%**
- **Regional Service – 37%**
- **Community Service – 22%**
- **This objective is an important indicator of all-weather, 24-hour airport access, which opens the facility to many types of aircraft and supports economic development, emergency medical transportation and business aviation.**

How do we apply the airport classification system to the alternatives?

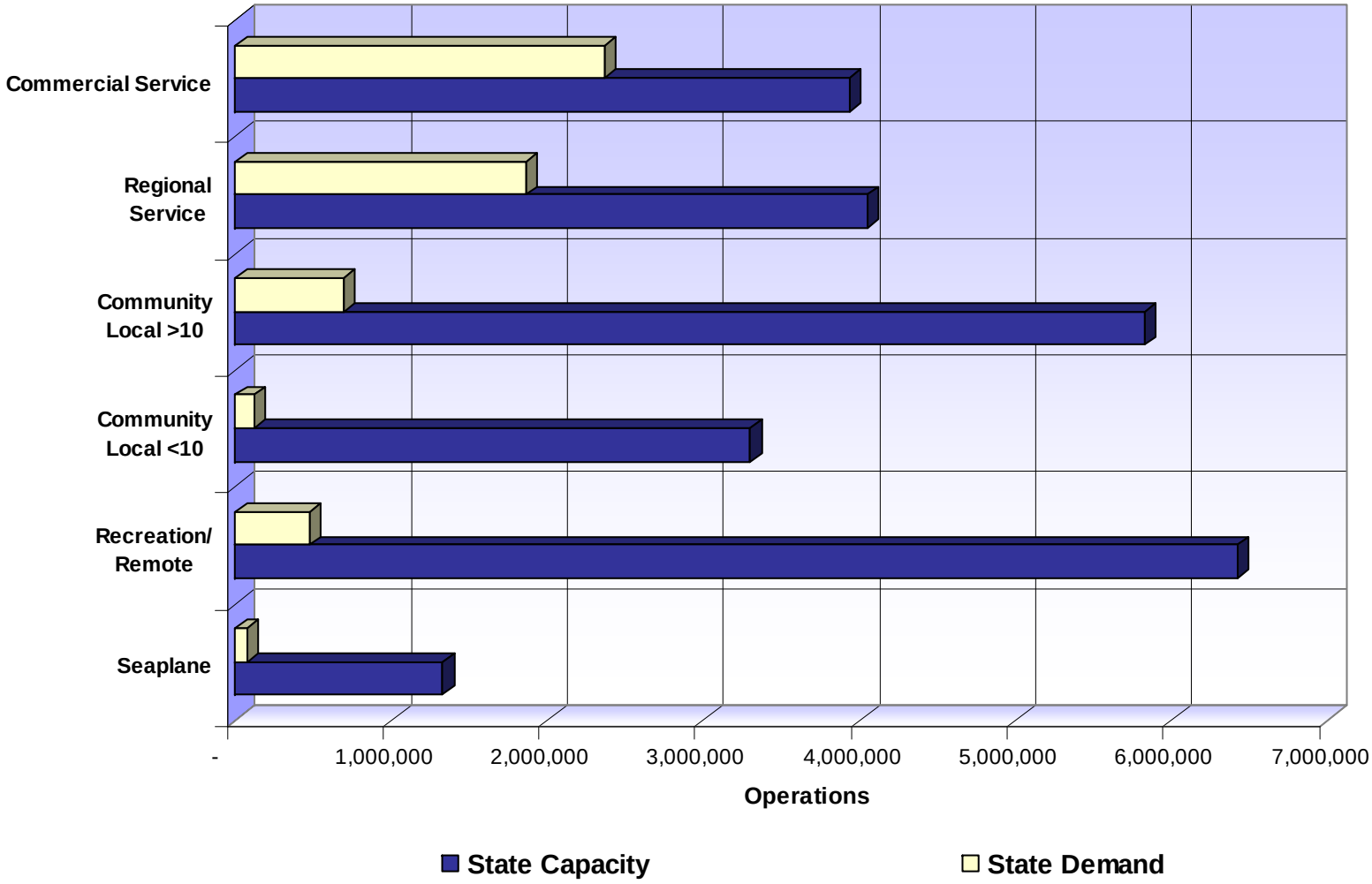
Implications	Cost Considerations
No-Action	
1. Airports will improve based on owner's objectives	1. Alternative airports may not provide desired facilities and services 2. System will remain unbalanced with some state funds going to airports and projects not aligned with objectives 3. More closures of private airports significant to the system are likely
Manage Existing System Facilities And/Or Demand	
1. Airports likely to strive to meet performance objectives 2. Clear expression of state's priorities, which encourages and focuses private investment	1. Airport sponsors may not agree with state's objectives 2. Some airports and projects that get state funding now may not in the future
Expand The Airport	
1. Increase in the number of airports meeting the performance criteria is expected 2. Clear expression of state's priorities	1. Airport sponsors may not agree with state's objectives 2. Some airports and projects that get state funding now may not in the future
Develop New Airport	
1. Clear expression of state's priorities, which encourages and focuses private investment 2. Best strategy for eliminating the worst performance problems	1. Airport sponsors may not agree with state's objectives 2. Some airports and projects that get state funding now may not in the future 3. New airport(s) could decrease demand at nearby existing airports, resulting in an adverse impact on existing facilities and services 4. May have less statewide benefit due to the focusing of funding on new airport(s). Incremental improvement of existing airports may worsen.

And Now for Capacity…

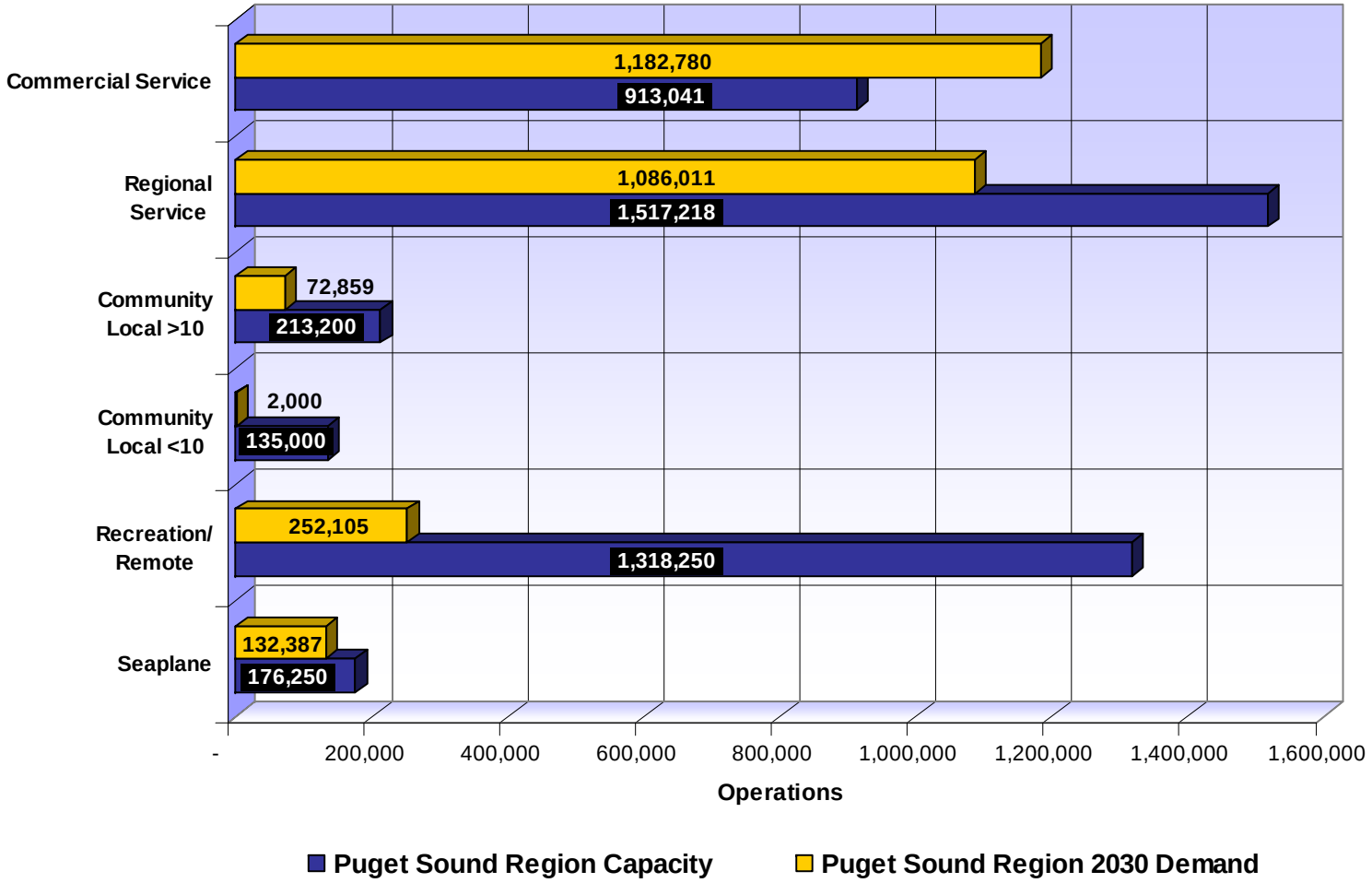
Capacity includes…

- Airfield Capacity
- Airspace Capacity
- Terminal Capacity
- Aircraft Storage
- Air Cargo

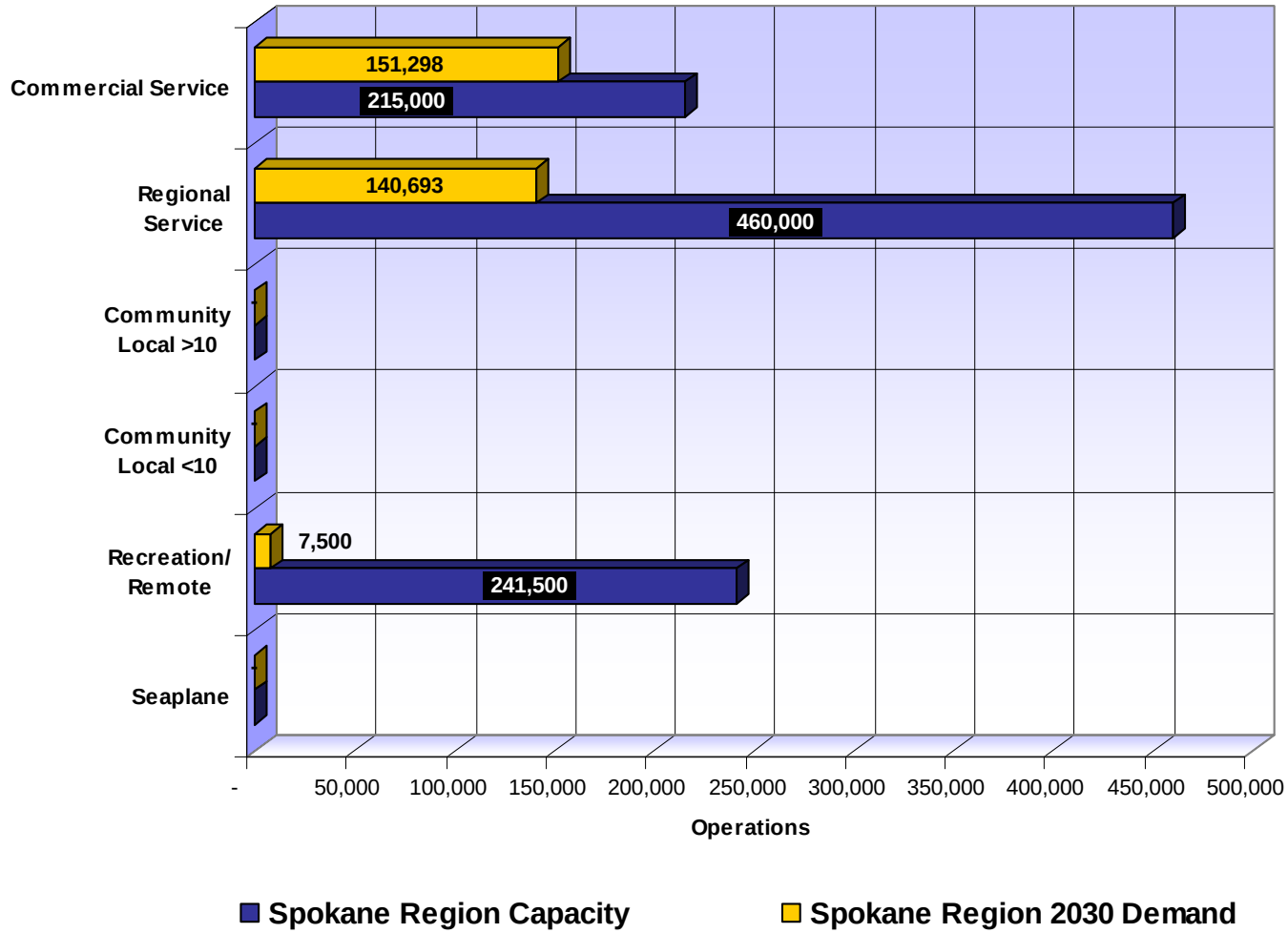
2030 Statewide Demand Vs. Capacity - by Airport Classification



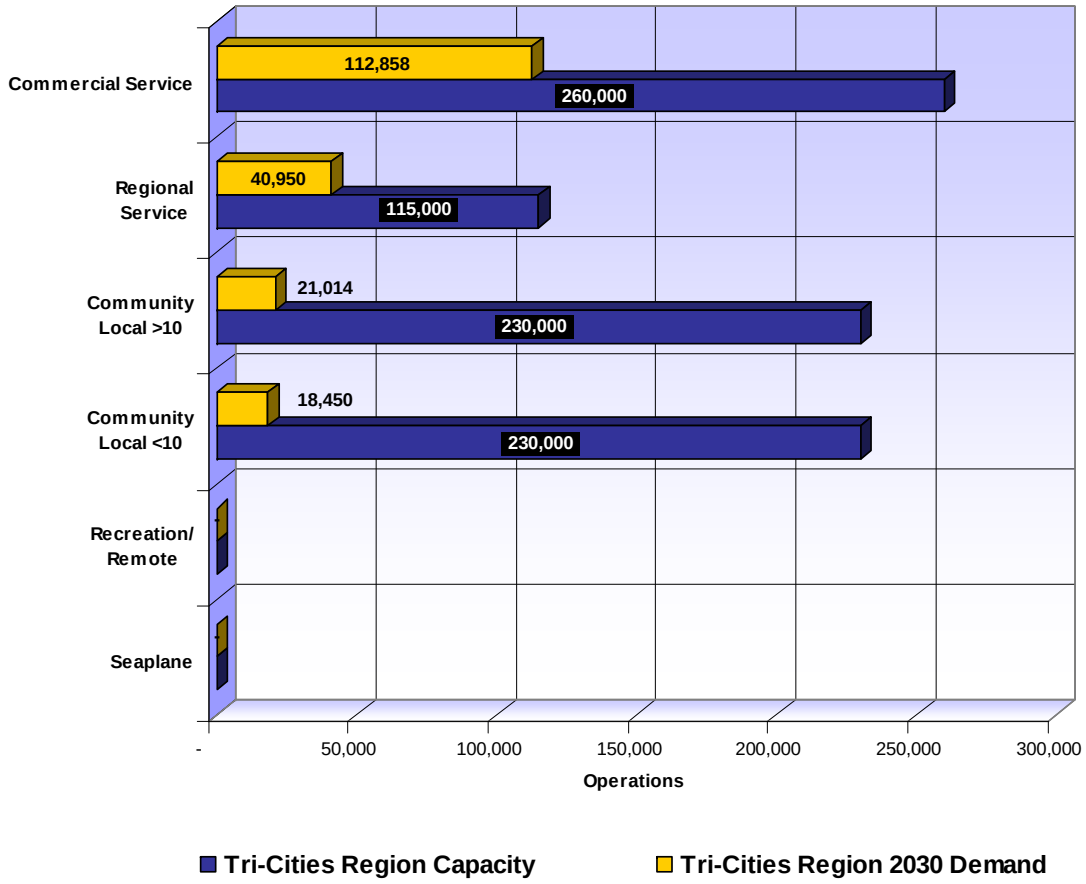
2030 Operations Demand vs. Capacity (Puget Sound Special Emphasis Area)



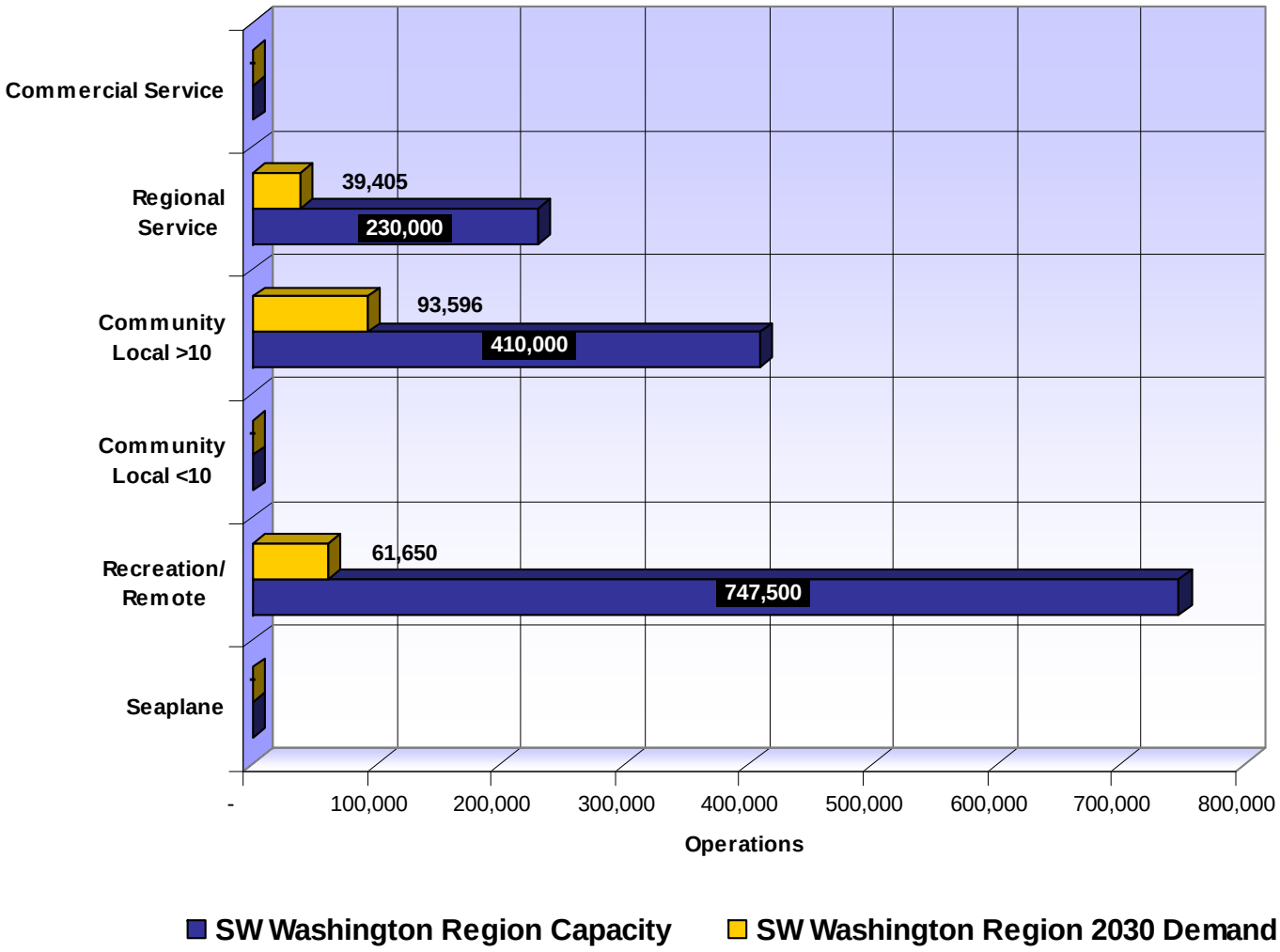
2030 Operations Demand vs. Capacity (Spokane Special Emphasis Area)



2030 Operations Demand vs. Capacity (Tri-Cities Special Emphasis Area)



2030 Operations Demand vs. Capacity (Southwest Special Emphasis Area)



Considerations

- SEA has adopted a policy that caps growth at three runways and whatever terminal development is needed to balance with the airfield
- Programs such as NexGEN will be implemented coincident with any State program
- Regardless of which direction the State takes, FAA will need to address airspace issues. A coordinated effort between airspace and Council recommendations will result in a more comprehensive outcome
- The Port of Seattle has committed to capping growth at SEA to balance the runway/terminal capacities. Any unfulfilled demand will need to be transferred elsewhere

Seattle-Tacoma International Airport

Advantages	Costs
No-Action	
1. Community needs will continue to be served 2. The State is not required to contribute money 3. Airport control remains local 4. Private marketplace makes decisions	1. Increased delay costs (locally and system-wide) 2. Increased local impacts (traffic, noise, congestion) 3. Negative impact on small community service at WA airports 4. Reduced community travel opportunities 5. Increased commercial service at Paine field may negatively impact aircraft manufacturing operations
Manage Existing System Facilities And/Or Demand	
1. Impacts remain concentrated 2. Implementation costs are minimized by managing access	1. Capacity shortfall of 100,000 operations by 2030 2. Delay and operating costs will increase 3. No increase in capacity or opportunity for increased travel opportunity 4. Negative impact on small community service 5. Likely result in commercial service at PAI 6. Overall negative systemwide impacts
Expand The Airport	
1. Impacts remain concentrated 2. Implementation costs will be minimized	1. Addition of a fourth runway replete with negative impacts and high costs 2. Expect community opposition
Develop New Airport	
1. New/additional air carrier operations capacity created and sized to meet anticipated demand. 2. Capacity will be sufficient through 50 years	1. Significant delay in bringing airport on-line will result in need for continuing improvements at other airports 2. Redistribution of demand brings key Puget Sound Region airports to full capacity in 2030 including SEA, BFI, and Paine Field. 3. If SEA activity relocates to Paine Field for the interim period (15-years), the case for a new airport may not be sustained 4. New airport site will attract peripheral growth

King County International Airport

Advantages	Costs
No-Action	
1. Community needs will continue to be served 2. State not required to contribute money 3. Airport control remains local 4. Private marketplace makes decisions	1. Increased delay costs (locally and system-wide) 2. Increased local impacts (traffic, noise, congestion) 3. Reduced community opportunity for aircraft basing 4. Negative system impacts 5. Negative impact on aircraft manufacturing 6. Demand will cascade to other airports – causing issues at these locales (Harvey, Tacoma Narrows, Auburn, Renton)
Manage Existing System Facilities and/or Demand	
1. Impacts will remain concentrated 2. Implementation costs minimized by managing access	1. Capacity shortfall of 169,000 operations by 2030 2. Delay and operating costs will increase 3. No increase in capacity/opportunity is likely 4. Likely result in increased activity at PAI, RNT and other regional airports 5. Overall negative systemwide impacts
Expand the Airport	
1. Impacts remain concentrated	1. Expansion of Boeing Field is near “impossible” 2. Expect community opposition to major expansion 3. Demand will be redistributed throughout the region
Develop New Airport	
1. New/additional capacity will be created and sized to meet anticipated demand levels 2. Increased capacity will satisfy demand for extended future	1. Significant delay in bringing airport on-line will result in need for continued improvements at other airports 2. Airport location will influence basing and use decisions by aircraft owners 3. New airport site will attract peripheral growth to the site

Harvey Field and Kenmore Air

Advantages	Costs
No-Action	
1. Community needs will continue to be served 2. State not required to contribute money 3. Airport control remains local 4. Private marketplace will make decisions	1. Increased delay costs (locally and system-wide) 2. Increased local impacts (traffic, noise, congestion) 3. Reduced community opportunity for aviation services
Manage Existing System Facilities And/Or Demand	
1. Impacts remain concentrated 2. Implementation costs minimized by managing access	1. Capacity shortfall will occur 2. Delay and operating costs will increase 3. No increase in capacity/opportunity for aviation services 4. Likely result in increased activity at other GA airports and seaplane bases 5. Overall negative systemwide impacts
Expand The Airport	
1. Impacts remain concentrated	1. Expect community opposition to expansion at Harvey Field 2. Demand will likely be redistributed to other regional GA airports
Develop New Airport	
1. New/additional capacity created sized to meet anticipated demand. 2. Capacity will satisfy demand for extended future	1. Significant delay in bringing airport on-line will result in need for improvements at other airports

Aircraft Storage Constraints

- Demand for hangars and tie downs can generally be met through expansion of existing airports' hangar areas
- Where airports cannot be expanded, adequate capacity exists within the system – generally within reasonable Distance of Demand
- Demand for aircraft storage is price sensitive

Passenger Terminal Constraints

- Except for SeaTac, terminal capacity will be solved by each individual Airport Sponsor through phased terminal expansion.
- SeaTac has adopted a policy that assures balance between terminal expansion and the capacity of the three runway airfield
- The individual airport Master Plans for most of these airports have considered terminal area expansion
- For small facilities and seaplane bases, capacity deficits can be addressed, in part through schedule management

Air Cargo Constraints

- Air cargo facilities are improved by either private parties or the airport sponsor as demand increases at the individual facilities.
- In all cases, capacity will be addressed at the individual Airports through the Airport Master Plan's CIP.
- The Air Cargo capacity within the busiest regions have been addressed through other studies and actions.

Airspace Constraints

- The current airspace architecture is not sufficient to accommodate Puget Sound's aviation needs through the year 2030
- Because the primary issue when discussing airspace capacity are the flight corridors between airports, flight path coordination between Puget Sound and Southwest Region airports will become increasingly important with service expansion.
- Any additional activity assigned to Paine Field can be expected to negatively impact operations at other airports within the Puget Sound region.
- Some of the additional traffic can be managed through NextGen, once it is in place but some issues will remain

Breakout Group Exercise:
Can this approach support our policies? If so, how?

	Take No Action	Meet Existing Need	Expand existing Facilities	Build new facilities
Capacity				
Stewardship				
Mobility				
Economy				
Environment				
Land Use				
Safety				

Break Out Groups

- How well do the alternatives support the Council's policy direction?

- What alternatives need to be addressed in the analysis of this alternative to help the Council make its recommendations?

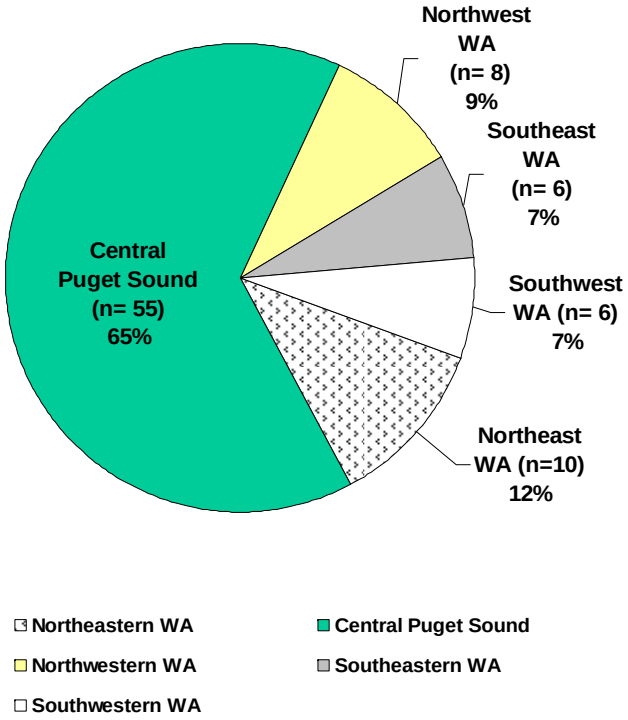
Report on E-Town Hall #2

E-Town Hall #2 – November 18, 2008

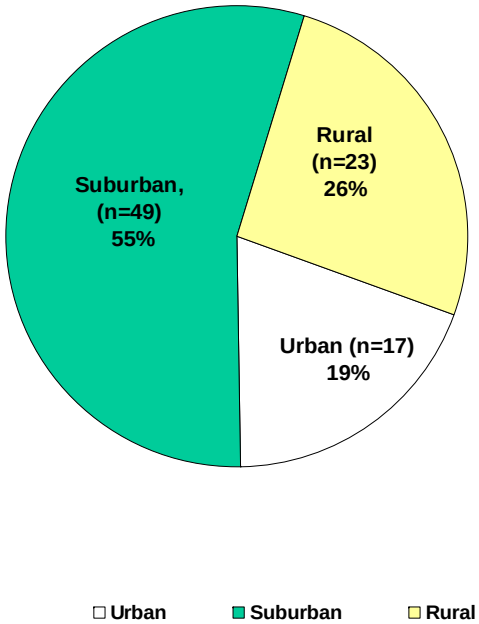
- **Approximately 100 participants, from panel randomly recruited by Knowledge Networks**
- **30 participants also attended E-Town Hall #1**
- **Event Structure:**
  - Presented background information on the State aviation system
  - Questions were designed to gather opinions on aviation system funding and issues relating to meeting future aviation capacity needs
  - Mix of multiple choice, scaled, and open ended response questions
  - 30 minute open Q&A session at the end
- **Report will be sent to Council by the end of December**

E-Town Hall Participant Demographics

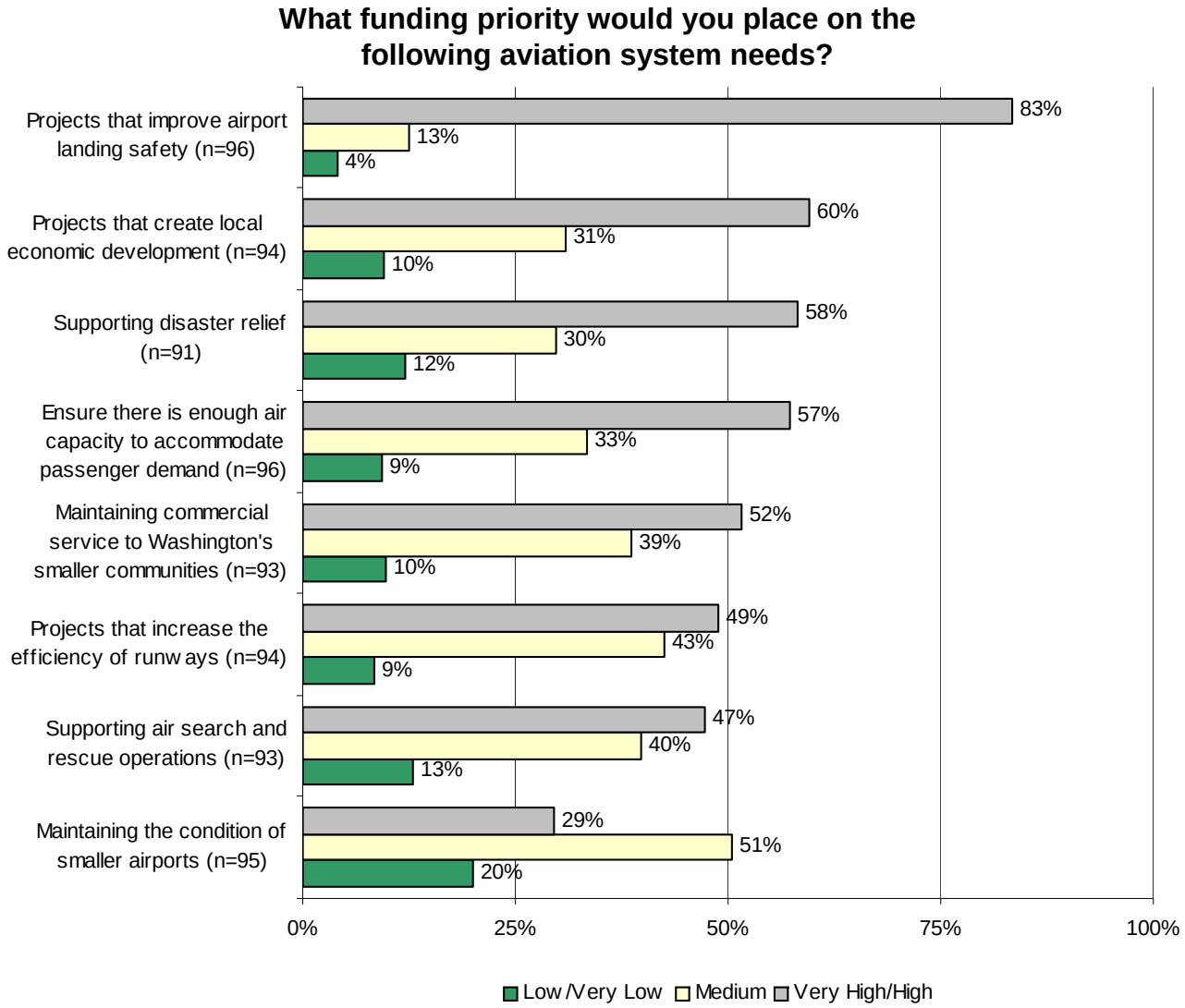
In what part of the state do you live?



Do you consider your community to be urban, suburban, or rural?

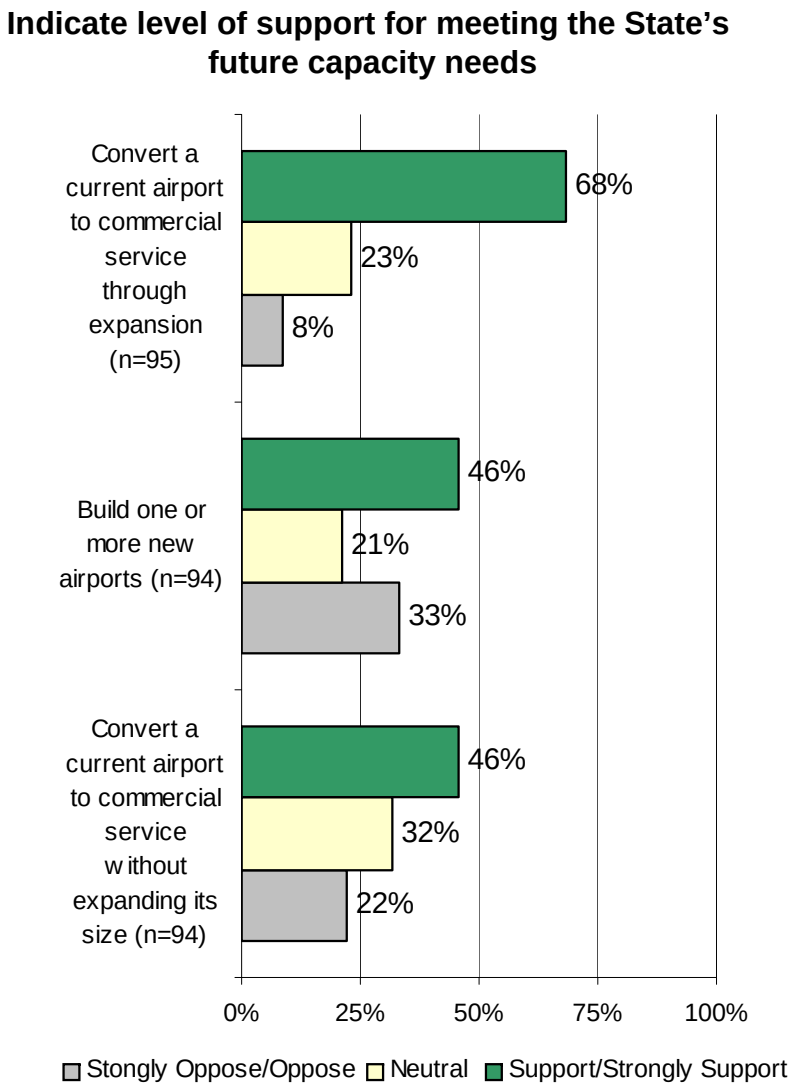


Views on Funding Priorities



- **Top funding priorities:**
  - Improving airport landing safety (83%)
  - Local economic development (60%)
  - Supporting disaster relief (58%)
  - Meeting passenger capacity demand (57%)

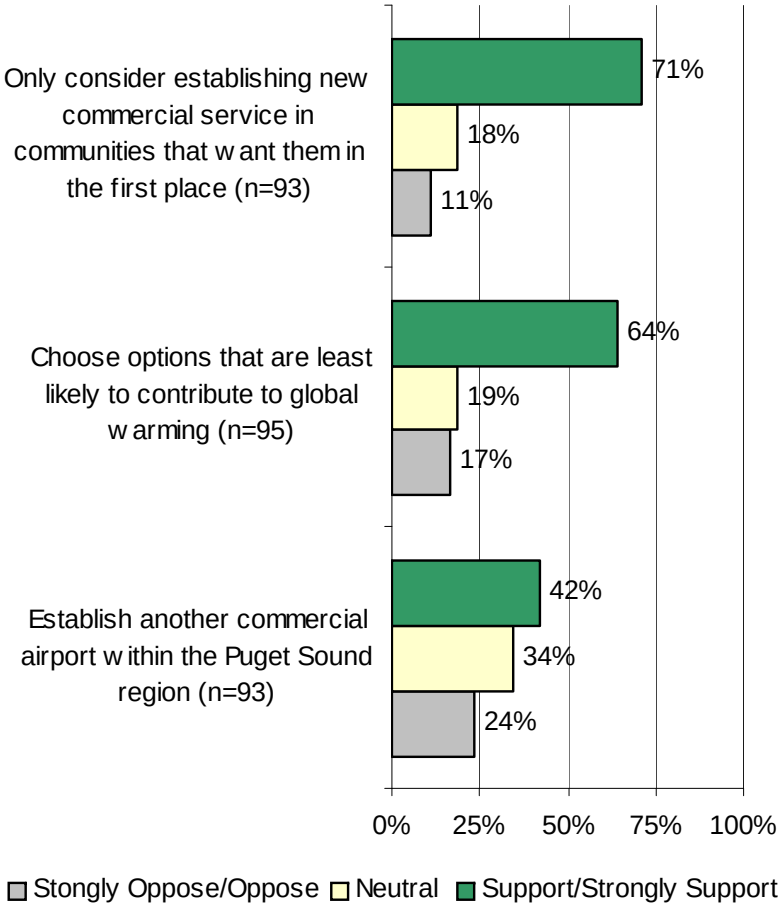
Meeting Future Capacity Needs



- **68% support or strongly support converting a current airport to commercial service through expansion**
- **Opinion was divided on building a new airport or conversion of existing airport without expansion as a means to meet future capacity needs.**

Building a New Commercial Airport

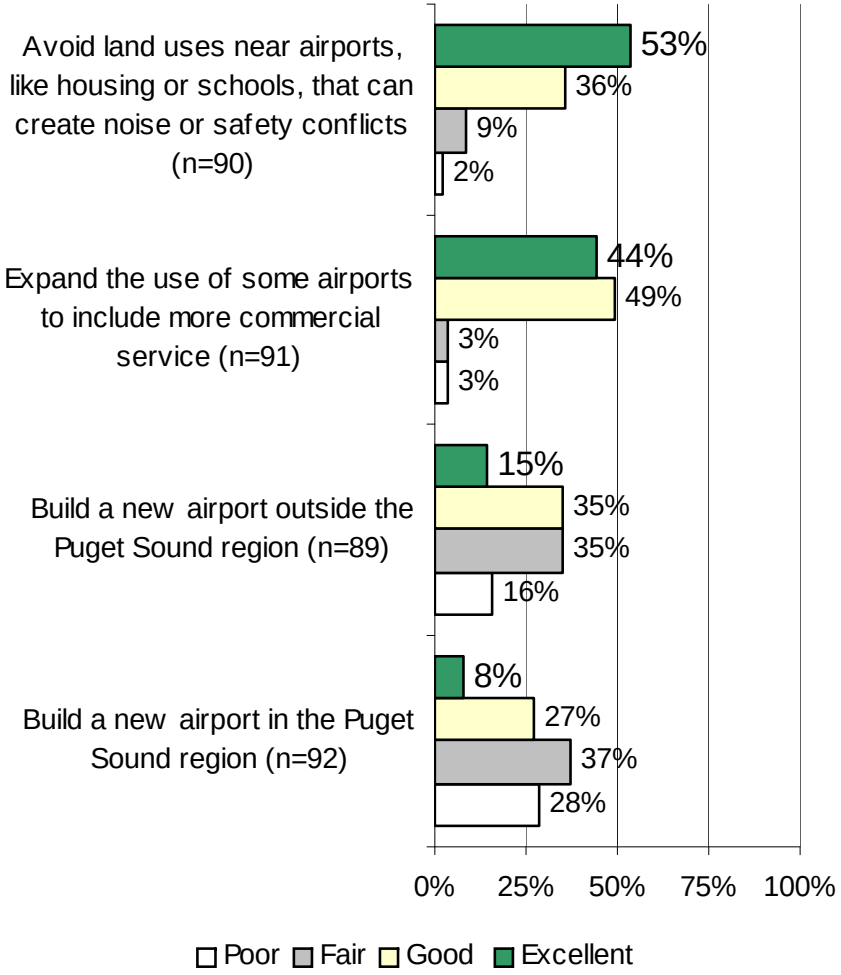
Suppose Washington State determined it needed a new airport. Indicate your level of support for the following:



- **Participants were most supportive of establishing new commercial service in communities that want it (71% support/strongly support).**
- **Participants were also supportive of choosing options that are least likely to contribute to global warming (64% support/strongly support).**
- **Opinion was divided about establishing another airport in the Puget Sound region.**

Address Capacity Shortfalls

Rate each idea for things the state could do to address aviation capacity shortfalls:



- **Most support for avoiding incompatible land uses near airports (89% responded 'excellent' or 'good')**
- **Support for expanding existing airports to include more commercial service (93% responded 'excellent' or 'good')**
- **Opinion was divided about building a new airport <u>outside of the Puget Sound Region</u>**
  - 50% responded 'excellent' or 'good' to this idea
  - 50% responded 'fair' or 'poor'
- **Least amount of support for building a new airport <u>in the Puget Sound region</u>**
  - 65% responded 'fair' or 'poor'
  - 35% responded 'excellent' or 'good'

Policy Development

Policy Development

- **Subcommittee Report:**
  - Recommended actions on safety, stewardship, economy and mobility
- **Proposed revisions to land use polices**
- **Action:**
  - Preliminarily approve draft statewide aviation policies

Air Transportation Revenue and Expenditure Report

John Shambaugh

Overview of Revenue and Expenditure Report

- Identification of state and federal revenue sources
- Description of how much money will be needed to address aviation capacity gaps to 2030
- Selection of preferred strategy to be forwarded to the Governor, Legislature, Transportation Commission and Regional Transportation Planning Organizations by July 2009.

Federal Revenue Sources

- **People who use nation air transportation system contribute to 75 percent of its funding:**
  - General aviation taxes on aviation fuel
  - Airline passenger tax on tickets
  - Shipping charges on packages
- **Aviation Trust Fund accounts for 77 percent of federal revenues designated for aviation.**
- **Twenty-three percent comes from US General Fund.**

Aviation Trust Fund Sources

Federal Aviation Trust Fund (FAA)	2008 Tax Rates
Passenger Ticket tax (domestic)	7.5%
Flight Segment Tax (domestic)	$3.50
Frequent Flyer Tax	7.5%
International Departure Tax	$15.40
International Arrival Tax	$15.40
Cargo Waybill Tax (domestic)	6.25%
Commercial Jet Fuel Tax (domestic)	4.3 cents
Noncommercial Jet Fuel Tax (domestic)	21.8 cents
Noncommercial AvGas Tax (domestic)	19.3 cents

Federal AIP Grant Funds Received for WA State Airports

- **FAA contributes significantly to WA State's aviation system**
- **In 2008 FAA provided 97 percent of funding for WA airports**
  - Sea-Tac received $38 million of the $96 million WA airports received from the FAA.
- **WSDOT contributed about 1 percent and locals provided a 2 percent match to NPIAS airports.**

WSDOT Aviation Revenue Sources

- **Ninety-six percent of WSDOT Aviation's revenue comes from 11 cent tax on aviation fuel. Commercial airlines and other exemptions apply.**
  - Tax generates approximately $2.5 million annually.
- **WSDOT registers about 5,500 aircraft annually and generates about $100,000 in revenues.**
  - About $250,000 of aircraft registration revenues are deposited into the state's General Fund.
- **Other (aircraft dealer licenses, transportation multi-modal funds)**
  - Accounts for less than 1% of total budget

State Revenue from Aviation Related Sources -07-09

Approximately 81 percent of state aviation-related revenues are deposited into the General Fund

AERONAUTICS ACCOUNT	**Forecast 2007-2009**
Aviation Fuel Tax (11 cents per gallon)	$5,800,000
Aircraft Registration/Excise/Dealer Fees	$242,000
TOTAL – AERONAUTICS ACCOUNT	**$6,042,000**
STATE GENERAL FUND (estimated)	
Annual Aircraft Registration Excise Tax - State	$518,411
General Aviation Sales Tax from Aviation Fuel	$9,928,650
Commercial Air Transport Sales Tax from Fuel	$15,382,000
TOTAL – GENERAL FUND	**$25,829,061**
TOTAL REVENUES FROM AVIATION SOURCES	**$31,871,061**

Exemptions

- **Several exemptions exist for aircraft registration including commercial, aircraft being held for sale, aircraft used for government purposes, etc. (see page 16 of report for full list)**
- **Several exemptions exist on excise tax for aviation fuel including air carriers, supplemental air carriers, aircraft fuel sold for export, aircraft used for testing, local commuter service, etc. (see page 16 of report for full list)**

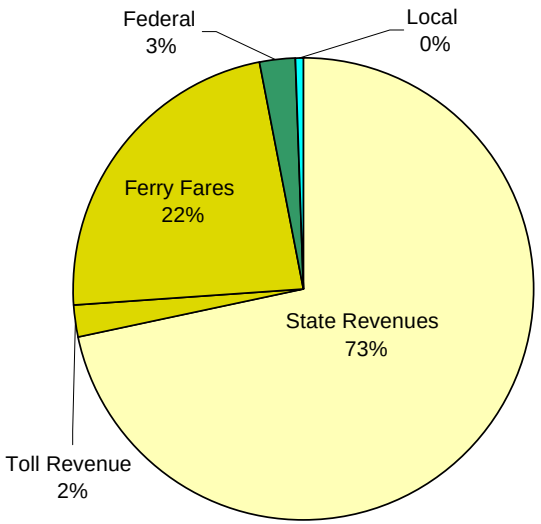
Other Taxes

- **Non Commercial Aviation Sales Tax**
  - Estimated by DOR that 6.5 percent tax generates about $9.9 million
  - Deposited into the state's General Fund
  - Local sales tax ranges from .5 percent to 2.5 percent and generates about $3 million for local authorities according to DOR
- **Commercial Aviation**
  - Use tax on commercial fuel consumed is collected by DOR and deposited into state's General Fund
  - In 2008 commercial fuel tax at 6.5 percent generated $15 million
- **Aviation Use Tax**
  - DOR collects one-time tax for aircraft purchased or brought into state.
  - Revenue deposited into General Fund
  - DOR is currently researching amount of revenue generated from use tax.

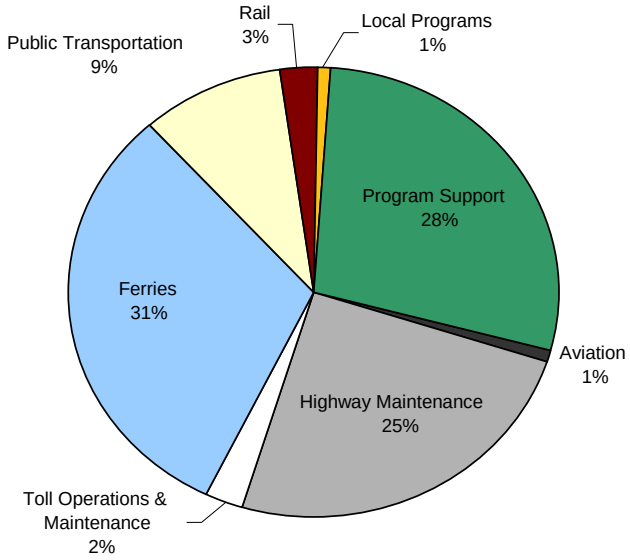
WSDOT Operating Budget – 07-09

- **Total 07-09 operating budget = $1.5 billion**
- **Significant portion of WSDOT's budget is dedicated to ferries, highways and program support.**
- **Aviation accounts for only 1 percent of the department's total operating budget.**

Sources

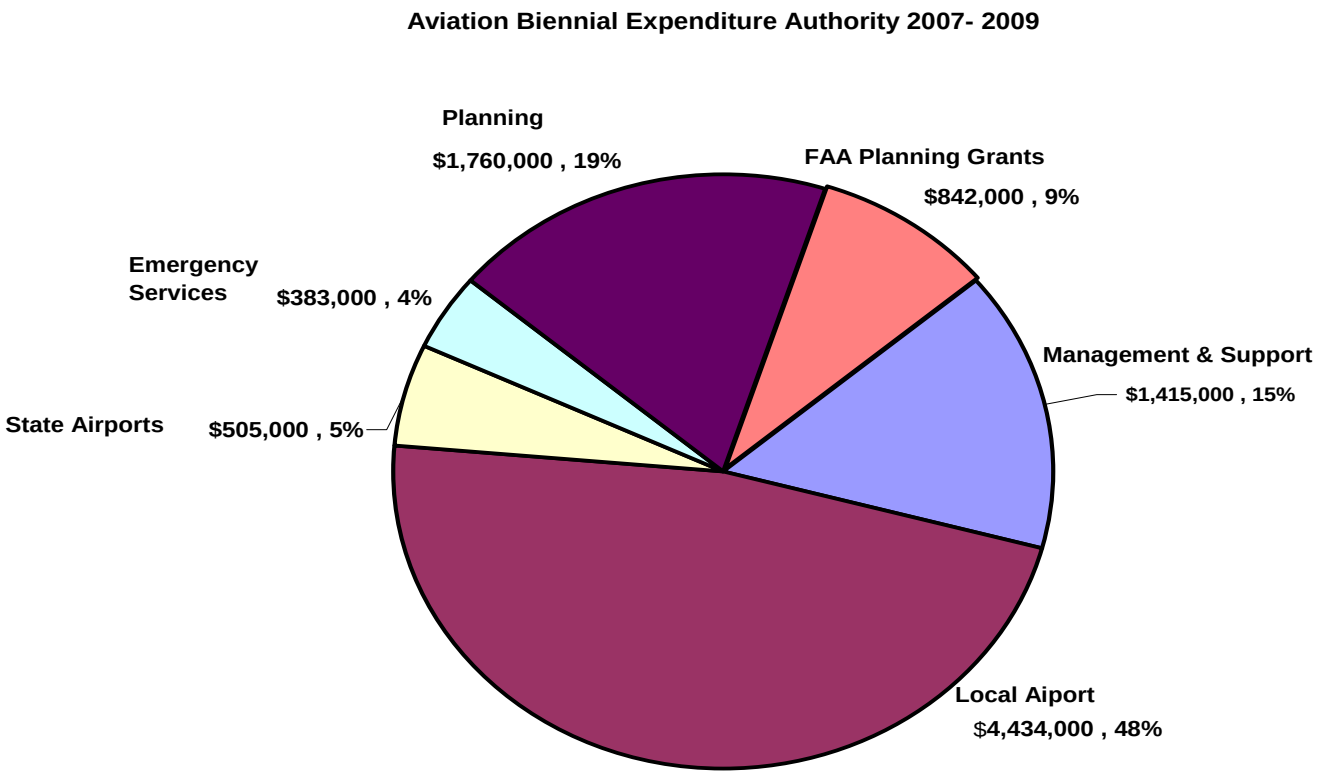


Uses

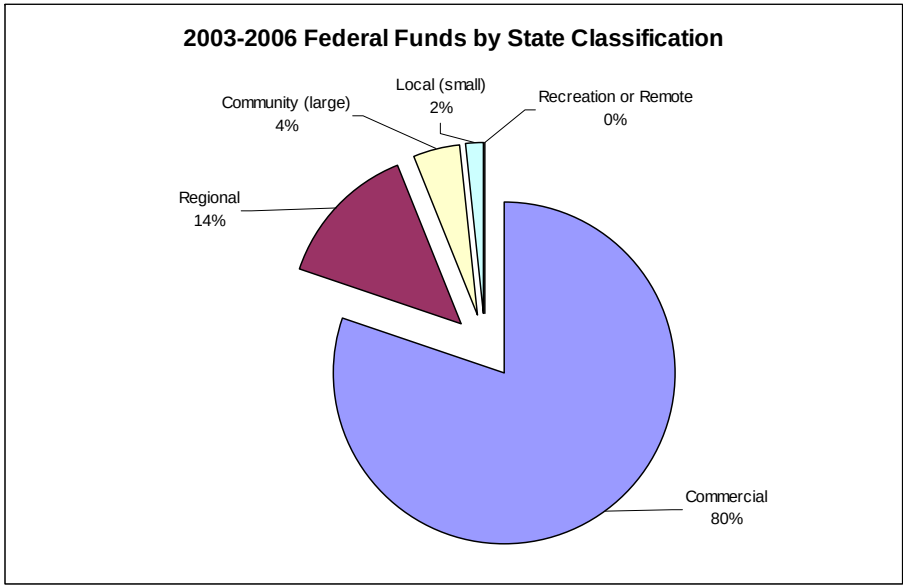


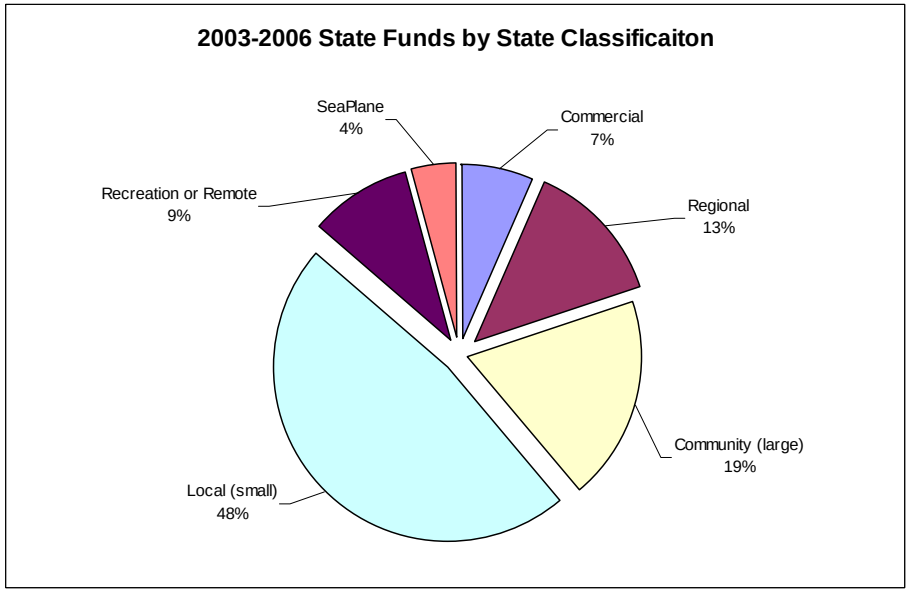
WSDOT Aviation Operating Budget – 07-09

- **Fifty percent of WSDOT Aviation's budget is used for Local Airport Aid Grant Program**
- **Each biennium WSDOT uses about $2.5 million to fund statewide airport infrastructure projects**



State and Federal Spending by State Classification





80% of Federal Funds are Allocated to Commercial Service Airports

Projects	Classification	Federal Funds
122	Commercial	$455,247,841
71	Regional	$78,656,701
51	Community (large)	$24,803,604
24	Local (small)	$8,881,498
2	Recreation or Remote	$339,167
0	SeaPlane	$0
	Total	$567,928,811

48% of State Funds are Allocated to Local Airports

Projects	Classification	State Funds
25	Commercial	$556,595
5	Regional	1,083,139
82	Community (large)	1,563,011
126	Local (small)	3,924,494
16	Recreation or Remote	774,648
3	SeaPlane	350,000
	Total	$8,251,887

Conclusions

- WSDOT relies on FAA funding for about half of WA State's airports
- FAA revenues are generated through taxes on airline fuel, tickets and packages.
- Over 96 percent of WSDOT Aviation revenues are generated through 11 cent fee on aviation fuel (commercial aircraft exempt)
- Only about 19 percent of total aviation-related revenues collected in WA are deposited into WSDOT's Aeronautical Account. The rest are deposited in the state's General Fund or distributed to local governments imposing the tax.

Discussion

- **What additional information is needed for the Council to develop its recommendations?**

Council Administration and Next Steps

- **Next Steps:**
  - Develop order of magnitude costs for alternatives
  - Develop narrative for alternatives
  - Draft system plan and Council report to Council by January 1st
  - Potential conference call in mid-January to review reports
  - Revised reports drafts to Council in February meeting packet
- **Council Administration:**
  - Council Meetings
    - *Meeting #9: February 5, 2009 (Tri Cities)*
  - Public Involvement
    - *Online Survey – March 2009*
    - *Regional Public Meetings – March 2009*