

Washington Pilots Association Retreat

# WSDOT Aviation Division: Aviation Economic Impact Study

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Arlington & Olympia, Washington



# Economic study makes headlines!

- **Aviation economic benefits soar in Washington**

Impact study provides positive news on state's public airports



- **Aviation 'critical' to Washington state economy**



- **Aviation economic benefits soar**



- **Impact study provides positive news on state's public airports**



- **WA Aviation Industry soars in the last decade**



- **Airport commissions to discuss economic impact**



# Presentation Outline

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- Economic Impacts: Pangborn Memorial Airport
- Overview of the Aviation System Plan
- Study's Background and Purpose
- Study's Approach- *Airport, Industry, & User*
- Findings
- Final Products
- Updates

# Economic Impacts: Pangborn Memorial Airport

## Estimated Regional Impact from Airport Businesses

- Jobs- 115
- Labor Income- \$6.2 million
- Economic Output- \$22.3 million

## Estimated Regional Impacts from Visitor Spending

- Jobs- 129
- Labor Income- \$4.8 million
- Economic Output- \$15.0 million

## Tax Revenues Generated by the Pangborn

- Cities- \$62,800
  - County- \$117,000
  - Special Districts- \$158,000
  - State- \$695,000
- } **\$1,032,800**



# The State's Aviation System

- 136 public use airports- 36 of the state's 39 counties.
- 64 airports are eligible for federal funding (NPIAS)

Ownership	Airports
City/Towns	40
County	10
Port Districts	33
WSDOT	16
Private	30
Joint / Airport Authorities	5 / 2



# The State's Aviation System

## State Airport Classifications

Classification	Description	# Airports	Example Airports
<b>Commercial Service</b>	Accommodates at least 2,500 scheduled passenger boardings per year for at least three years.	16	<ul style="list-style-type: none"> <li>• Bellingham International</li> <li>• Sea-Tac International</li> <li>• Spokane International</li> </ul>
<b>Regional Service</b>	Serves large or multiple communities; all NPIAS Relievers; 40 based aircraft and 4,000-foot long runway, with exceptions.	19	<ul style="list-style-type: none"> <li>• Olympia Regional</li> <li>• Renton Municipal</li> <li>• Paine Field</li> </ul>
<b>Community Service</b>	Serves a community; at least 20 based aircraft; paved runway.	22	<ul style="list-style-type: none"> <li>• Lopez Island</li> <li>• Thun Field</li> <li>• Richland</li> </ul>
<b>Local Service</b>	Serves a community; fewer than 20 based aircraft; paved runway.	33	<ul style="list-style-type: none"> <li>• Cle Elum Municipal</li> <li>• Davenport Municipal</li> <li>• Port of Ilwaco</li> </ul>
<b>Rural Essential</b>	Other land-based airports, including residential airparks.	37	<ul style="list-style-type: none"> <li>• Camano Island Airfield</li> <li>• Sequim Valley</li> <li>• Vashon Municipal</li> </ul>
<b>Seaplane Bases</b>	Identified by FAA as a seaplane base, unless it is a commercial service airport.	8	<ul style="list-style-type: none"> <li>• Friday Harbor SPB</li> <li>• Poulsbo SPB</li> <li>• Rosario SPB</li> </ul>

# Aviation Economic Impact Study



<http://www.wsdot.wa.gov/aviation/WAEconomicStudy.htm>

# Background

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- The Aviation Economic Impact Study was:
  - Conducted by the WSDOT Aviation Division
  - Supported by a grant from the Federal Aviation Administration (FAA).
  - An update to the 2001 Economic Impact Study.
  - A collaborative effort with stakeholders.
  
- Foundational document to help WSDOT become the primary steward and advocate for protecting the state's aviation system interest.

# Purpose

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- Determine the role aviation plays in Washington's economy.
- Measure the economic and fiscal impacts of each airport.
- Demonstrate how the system contributes to the well-being of the state and individual communities.
- Explore how the aviation system supports economic development and competitiveness.

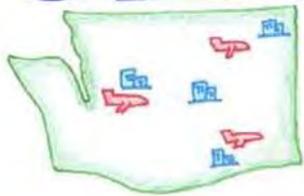
# Approach: Three Perspectives

## 1 AIRPORT



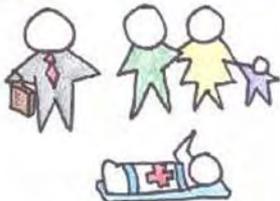
- Economic impacts are **significant** and **concentrated** at four large airports.
- Significant share of activity on through-the-fence connections (**aircraft manufacturing**).

## 2 INDUSTRY



- **97% of state Gross Business Income (GBI)** within 10 miles of an airport.
- Some industries concentrated near airports, some less so, but **many depend on aviation for critical business factors** (markets, inputs, labor).

## 3 USERS



- Immense value derived from other aviation services **not captured by traditional impact analysis**.
- User value **important for smaller communities** where airports provide a valuable link to services, commerce, and the broader aviation network.

# Airport Perspective

## Why is this perspective important?

- This is traditional economic impact analysis under FAA guidelines.
- Direct, quantifiable estimate of jobs, wages, and economic activity associated with aviation facilities and services.
- Particularly important for airports with large amounts of on-site business activity or visitor traffic.



# Airport Perspective

## Summary of Statewide Impacts

### 2012 STUDY

	Direct Impacts			Indirect/ Induced Impacts	Total Impacts
	Visitor Spending	On-site Businesses	Total Direct Impacts		
Jobs	61,400	79,900	141,350	107,150	248,500
Labor Income	\$ 1.8 B	\$ 8.2 B	\$ 9.9 B	\$ 5.4 B	\$ 15.3 B
Output	\$ 5.4 B	\$ 29.4 B	\$ 34.8 B	\$ 16.1 B	\$ 50.9 B



<http://www.wsdot.wa.gov/aviation/WAEconomicStudy.htm>

# Airport Perspective

## List of Major Public Use Airports, Ranked by Total Direct Jobs

Airport Name	Direct Jobs			Total Direct Output	Direct Output per Direct Job
	Visitor Spending	On-site Businesses	Total Direct Jobs		
Sea-Tac International	54,700	9,910	64,610	\$ 7,013.9 M	\$ 109,000
Snohomish County/Paine Field	30	34,260	34,290	\$ 14,864.5 M	\$ 434,000
Boeing Field/King County International	220	18,410	18,630	\$ 6,387.9 M	\$ 343,000
Renton Municipal	20	10,270	10,290	\$ 4,933.9 M	\$ 479,000
Spokane International	3,880	2,020	5,900	\$ 718.9 M	\$ 122,000
Bellingham International	990	620	1,610	\$ 160.1 M	\$ 99,000
Tri-Cities	560	350	910	\$ 100.2 M	\$ 110,000
Yakima Air Terminal	110	540	650	\$ 89.1 M	\$ 136,000
Arlington Municipal	30	570	590	\$ 94.5 M	\$ 159,000
Skagit Regional	20	350	370	\$ 41.3 M	\$ 112,000
Kenmore Air Harbor SPB	80	230	310	\$ 34.4 M	\$ 110,000
All Other Airports	770	2,390	3,160	\$ 374.2 M	\$ 118,000

- The airports with greatest aviation-related activity are commercial service or regional airports.
- Washington State is unique in that aircraft manufacturing activity plays a significant role in generating jobs and economic impacts.

# Airport Perspective

## ▪ Fiscal Impact Analysis

Classification	Aircraft Excise Tax	Aviation Fuel Tax*	Sales and Use Tax**	Property Tax***	B&O Tax	Other	Total
Commercial	144,000	471,000	390,277,000	30,335,000	121,000,000	115,228,000	657,455,000
Regional	235,000	829,000	7,724,000	13,804,000	98,980,000	6,227,000	127,799,000
Rural Essential	49,000	124,000	680,000	1,628,000	89,000	163,000	2,733,000
Community Service	105,000	364,000	923,000	604,000	401,000	334,000	2,731,000
Local Service	19,000	60,000	132,000	255,000	169,000	37,000	672,000
Seaplane Base	1,000	0	112,000	53,000	10,000	26,000	202,000
<b>Total</b>	<b>553,000</b>	<b>1,848,000</b>	<b>399,848,000</b>	<b>46,679,000</b>	<b>220,649,000</b>	<b>122,015,000</b>	<b>791,592,000</b>
<b>% of Total</b>	<b>0.1%</b>	<b>0.2%</b>	<b>50.5%</b>	<b>5.9%</b>	<b>27.9%</b>	<b>15.4%</b>	

\* Fuel used for commercial aviation is exempt from the state aviation fuel tax.

\*\* Includes sales and use tax paid on general and commercial aviation fuel.

\*\*\* Includes taxes paid on airline service providers' personal property.

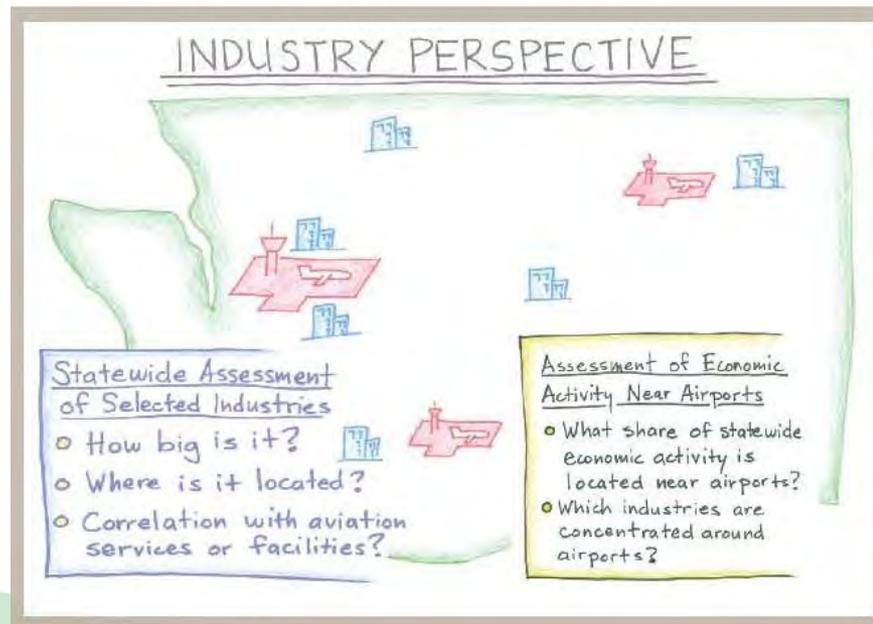
- Public-use airports generated about **\$792 million** in tax revenue in 2009.
- **\$548 million** supports the state's General Fund.
- Nearly **\$244 million** is split fairly evenly amongst cities, counties, and special purpose districts.



# Industry Perspective

## Why is this perspective important?

- Looks at relationships between aviation and businesses beyond the limited airport footprint.
- Important to capture the ways in which aviation affects business factors of production and location decisions.
- This is something that has not been done before.



# Industry Perspective

- Economic activity and aviation are **intrinsically linked**.
- Airports play an important role for many industries core business needs: **access to markets, access to inputs of production, and access to labor**.
- Share of Gross Business Income (GBI) near airports:
  - **70% within 5 miles**
  - **97% within 10 miles**



## Share of State GBI

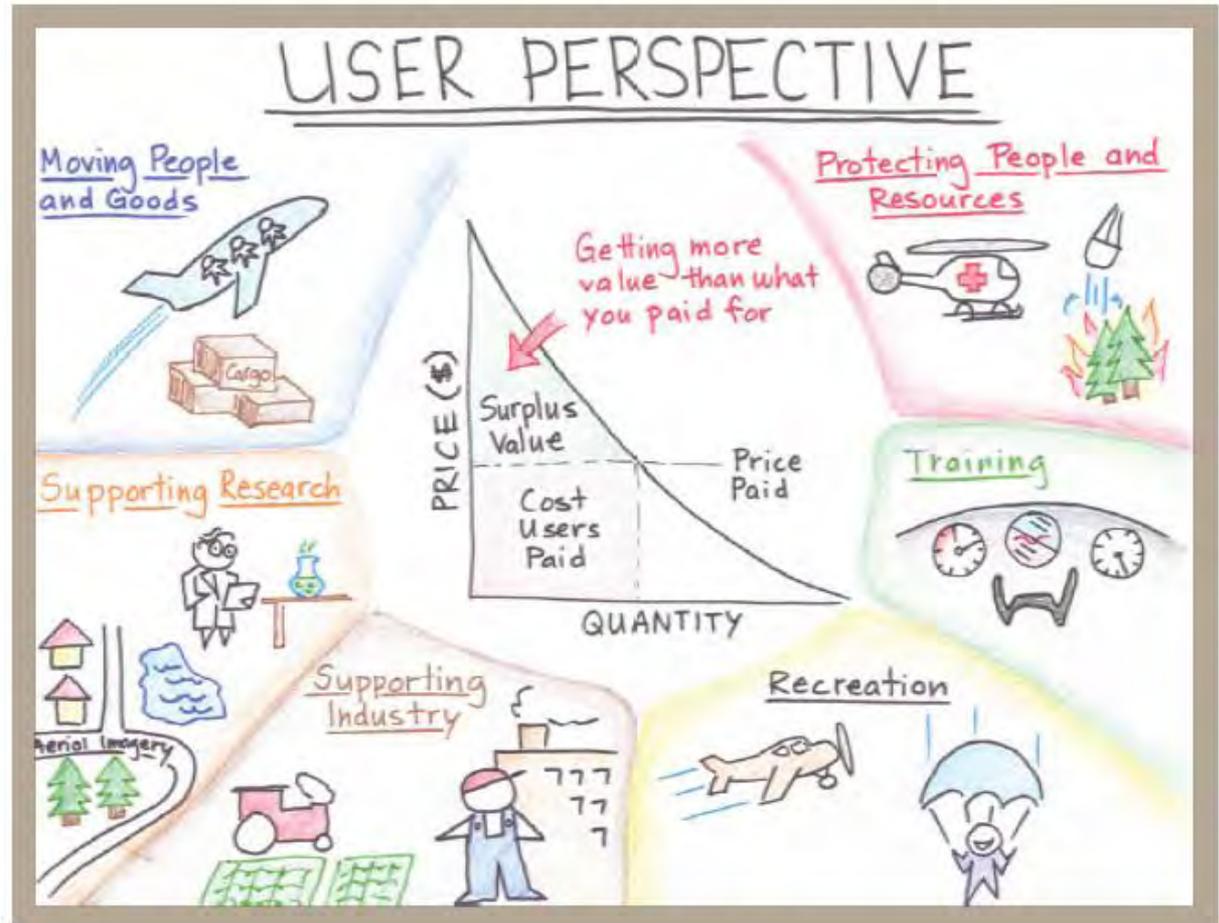
Within 5 miles: 70%

Within 10 miles: 97%

# User Perspective

## Enables Services that:

- Save Lives
- Protect Property
- Promote Business Activities
- Support Recreation & Tourism



# Findings

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- **There are significant direct economic and fiscal benefits created by the aviation system in the state.**
- **The system is a core element of the state's transportation infrastructure, which supports local and state economic prosperity.**
- **The value derived by individuals, communities, and businesses from their access to and use of aviation services far exceeds even the direct job, wage, and output impacts.**
- **It will be critical that aviation system needs be thoughtfully considered when discussing priorities for public funding.**

# Final Products

- Economic Assessment Report



- 135 Airport Profiles

**Pierce County/Thun Field**  
16715 Meridian E Puyallup, WA 98375

Thun Field, built in 1944, is just south of the City of Puyallup and offers spectacular views of Mt Rainier. The Airport has 211 single-engine and 20 multi-engine piston-powered Runway 16-34 (10,000 ft long, 60 ft wide) has an asphalt surface and pre-computered precision runway centerline lights. Each end has precision approach path indicators for vertical guidance. Both ends have runway end indicator lights. Runway 16 approach is visual. Runway 34 has a published non-precision GPS approach.

**AIRPORT CHARACTERISTICS**

Location:	Service Classification:	Approach:
Legislative Dist: 25	Federal: General Aviation Airport	Airport Elevation: 537'
Associated City: Puyallup	State: Pierce	Approach Category: B: 91 to < 121 knots
County: Pierce	FAA: 1	

Organizational Structure: Runway(s) Type of Airport  
 Ownership Type: County Govt. Number: 1 Alpha FAA: ID  
 Owner: Pierce County Type(s): Alpha Description: Beech King Air

**AIRPORT ACTIVITY**

Activities	Based Aircraft	Cargo
Agricultural Spraying	<input type="checkbox"/> Small <input type="checkbox"/> Turboprop <input type="checkbox"/> Jet	Number of Cargo Carriers
Air Ambulance	<input type="checkbox"/> Multi-Engine	Total Cargo System (Tons)
Medical Transport	<input type="checkbox"/> Single-Engine	
Business/Profit Making/Manufacturing	<input type="checkbox"/> Piston/Prop	General Transportation
Aerial Surveying	<input type="checkbox"/> Single-Engine	Mail and Express (1000000)
Industrial/Manufacturing	<input type="checkbox"/> Turboprop	
General Aviation	<input type="checkbox"/> Jet	
Flight Training	<input type="checkbox"/> Multi-Engine	
Other	<input type="checkbox"/> Single-Engine	

- Online Economic Calculator

**WSDOT AVIATION ECONOMIC IMPACTS ONLINE CALCULATOR DRAFT INTERFACE - PRE-DESIGN**

**INSTRUCTIONS**  
 Read instructions here.

**SAMPLE ACTIVITIES**  
 Sample projects or changes in activity that a user might want to test, and the correct way to change the data.

**DISCLAIMERS**  
 \*Click here about what this tool can and cannot do, and how to interpret results.

**Based Aircraft Operations**

Airport Name	Year	Activities in the Economic Impact Region
Pierce County/Thun Field	2030	

**Commercial**

Year	General Aviation Operations	Commercial Air Taxi Operations (Charters)	Commercial Air Carrier Operations (Scheduled)
2010			
2019			
2028			

**Fuel Service**

Year	Assumed Average Airplane Load Factor	Assumed % Annual Growth
2010		
2019		
2028		

**Other Business**

Year	Aircraft and Aircraft Engine Manufacturing	Other Manufacturing/Restoration	Warehousing and Storage	Mgmt., Scientific, and Technical Consulting Services	Mechanical/Equipment Repair and Maint.	Research and Development	Other Business
2010							
2019							
2028							

**Change Activity**

Year	Current Operations	New Operations	Ret. New Small	Ret. New Midsize	Ret. New Large
2010					
2019					
2028					

**Digital Projects**

Year	Project Cost
2010	
2019	
2028	

**Infrastructure (roads, utilities, etc.)**

Year	FEDERAL GRANTS	STATE GRANTS	LOCAL FINANCING
2010			
2019			
2028			

Recalculate

# Online Economic Calculator

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Encourage your favorite airport manager to try it!



- Aviation Economic Impact Calculator website [www.wsdot.wa.gov/aviation/planning/economiccalc](http://www.wsdot.wa.gov/aviation/planning/economiccalc)

# Online Economic Calculator

## How it works

Airport Name	FAA Site Number	Year	Counties in the Economic Impact Region
<input type="text" value="Choose an Airport..."/>		<input type="text" value="2010"/>	

<b>Fuel Sales Offered At Airport</b>	Changes in Flight Activity	Changes in Business Activity	Changes in Cargo Activity	Capital Projects
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**Fuel Sales offered at this airport**

Use this area of the calculator if you want to change the status of fuel sales at this airport.

	Currently	New Scenario
<b>Aviation Gas (AvGas)</b>	No	<input type="text" value="No"/>
<b>Jet Fuel</b>	No	<input type="text" value="No"/>

▶ Instructions

# Online Economic Calculator

## Aviation Calculator Results

NEW SCENARIO ONGOING ESTIMATED ECONOMIC IMPACTS		
Direct	Indirect/ Induced	Total Impact
<b>Jobs</b>		
0.0	0.0	0.0
<b>Labor Income</b>		
\$0	\$0	\$0
<b>Total Output</b>		
\$0	\$0	\$0

NEW SCENARIO ONGOING ESTIMATED ECONOMIC IMPACTS		
Direct	Indirect/ Induced	Total Impact
<b>Jobs</b>		
0.0	0.0	0.0
<b>Labor Income</b>		
\$0	\$0	\$0
<b>Total Output</b>		
\$0	\$0	\$0

TOTAL EXISTING + NEW SCENARIO ONGOING ESTIMATED ECONOMIC IMPACTS		
Direct	Indirect/ Induced	Total Impact
<b>Jobs</b>		
90.0	64.6	154.6
<b>Labor Income</b>		
\$3,889,110	\$2,340,751	\$6,229,861
<b>Total Output</b>		
\$15,632,804	\$6,722,156	\$22,354,960

TOTAL EXISTING + NEW SCENARIO ONGOING ESTIMATED ECONOMIC IMPACTS		
Direct	Indirect/ Induced	Total Impact
<b>Jobs</b>		
81.2	48.0	129.2
<b>Labor Income</b>		
\$2,475,434	\$2,268,918	\$4,744,352
<b>Total Output</b>		
\$7,993,537	\$6,961,795	\$14,955,332

NEW SCENARIO ONE-TIME ESTIMATED ECONOMIC IMPACTS (From Construction)		
Direct	Indirect/ Induced	Total Impact

Print Report

Reset



# Proposal to Expand Study

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## Opportunity to expand study?

- To maintain a consistent methodology and stay within budget, the original study examined only aviation-related businesses on the airport footprints.
- Washington Airport Management Association (WAMA) expressed interest in capturing economic impacts of non-aviation related businesses on and off the airport footprints.

# Proposal to Expand Study

## WSDOT Proposal

- WSDOT has worked with consultants BERK to develop a proposal for WAMA.
- WSDOT would develop a database populated with economic data. Individual airports would use this database to create individual reports.
- Cost to WSDOT = \$20,000 for database. Costs to airports = \$15,000 - \$20,000 depending on the complexity of the analysis.

# Proposal to Expand Study

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## Next Steps

- WSDOT presented the proposal to WAMA president.
- WAMA is currently considering:
  - Does this have value to their members?
  - Would it be utilized by enough airports to make it a wise investment?
  - Does WAMA endorse the project?

For more information on the  
Aviation Economic Impact  
Study, please contact: →

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# Questions

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