

Washington State Transportation Commission

WSDOT Aviation Division: Airport Investments

"Update on the Airport Investment Study"

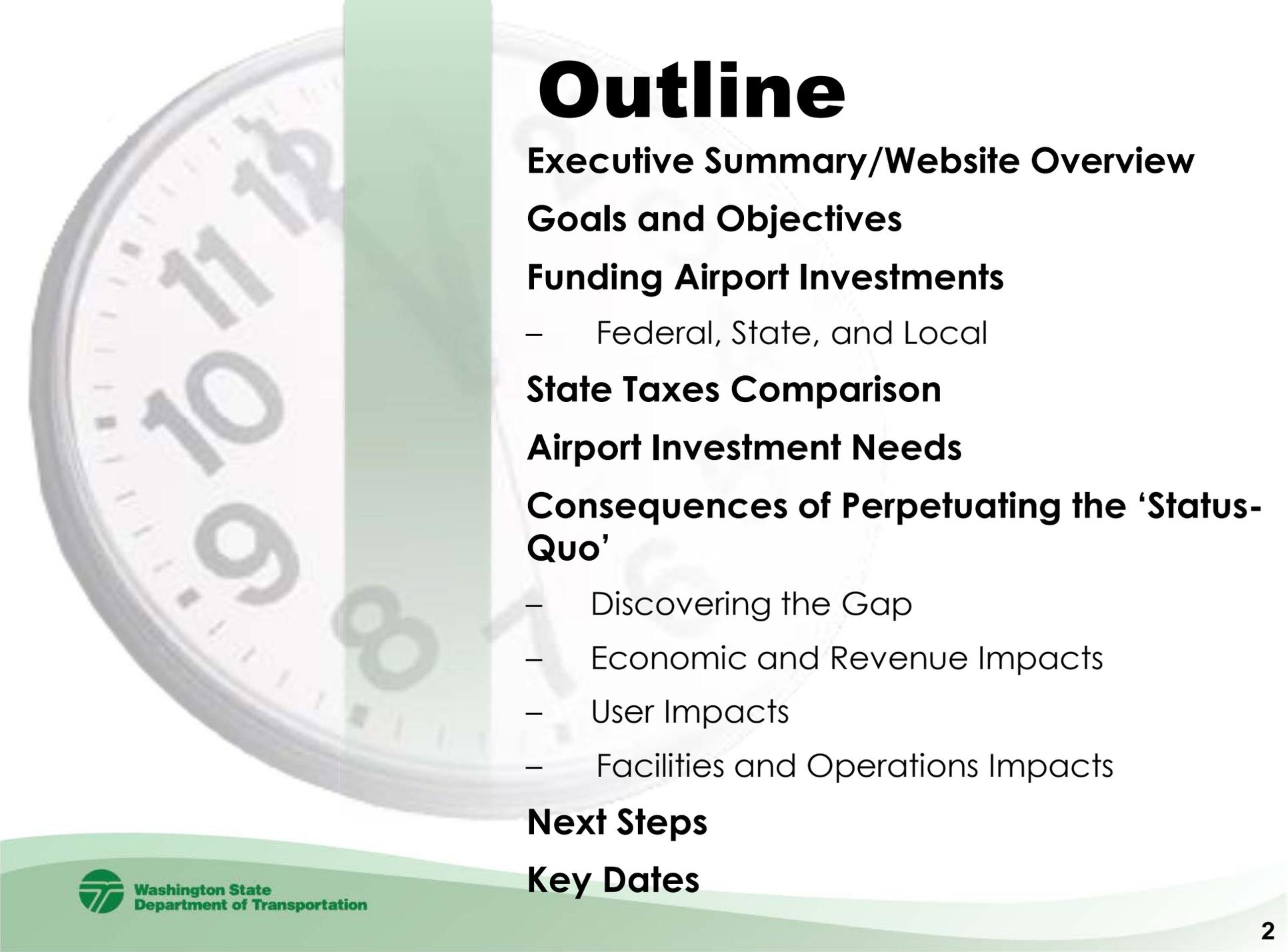


Tristan Atkins
Director of Aviation

Rob Hodgman
Senior Aviation Planner
WSDOT Project Manager

June 18, 2014





Outline

Executive Summary/Website Overview

Goals and Objectives

Funding Airport Investments

- Federal, State, and Local

State Taxes Comparison

Airport Investment Needs

Consequences of Perpetuating the ‘Status-Quo’

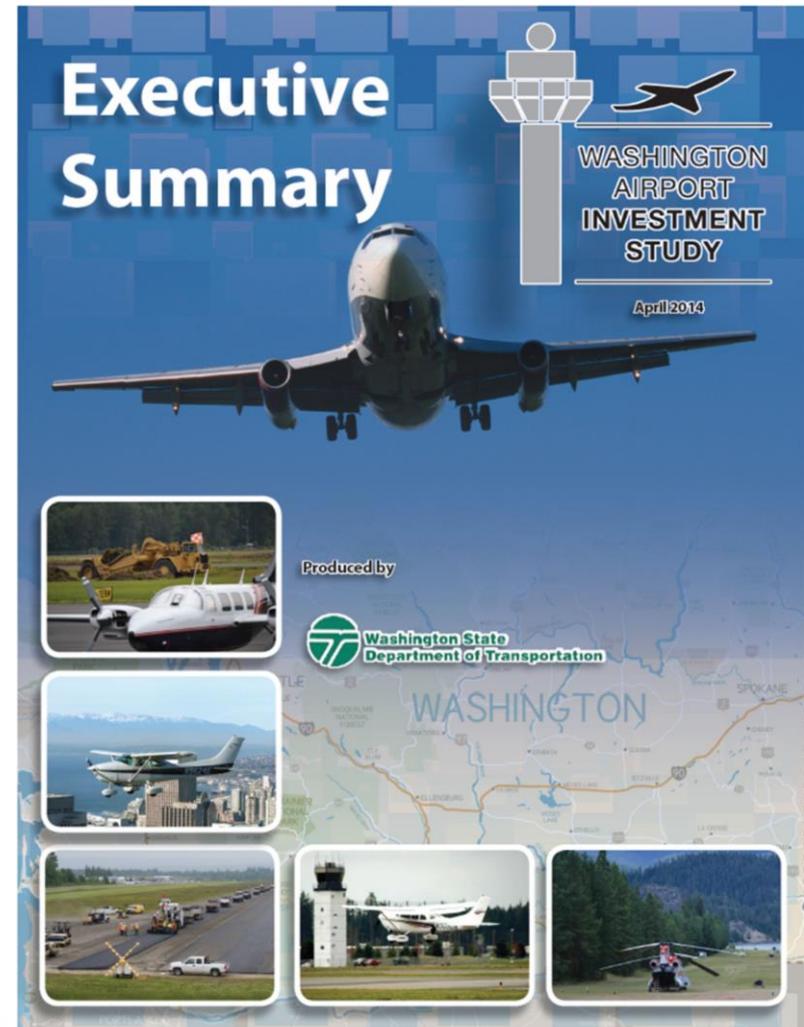
- Discovering the Gap
- Economic and Revenue Impacts
- User Impacts
- Facilities and Operations Impacts

Next Steps

Key Dates

Executive Summary Overview

- CD-ROM with entire 'Reference Guide' & Appendices
- Reference Guide Contents
- Advisory Committee Members
- Consultant/WSDOT Team



Airport Investment Study Website

- **Airport Investment Study Overview**
 - How can you stay updated on this study?
- **Final Report: Airport Investment Study Reference Guide**

[Executive Summary](#)

[Introduction](#)

[Funding Airport Investments](#)

[Airport Investment Needs](#)

[Consequences of Perpetuating Current Funding](#)

[List of Works Cited](#)

- **Appendices**
- **Advisory Committee Information**

[Advisory Committee brochure](#)

[Advisory Committee bios](#)

[WSDOT Project Team bios](#)

[Consultant Project Team bios](#)

- **More information**

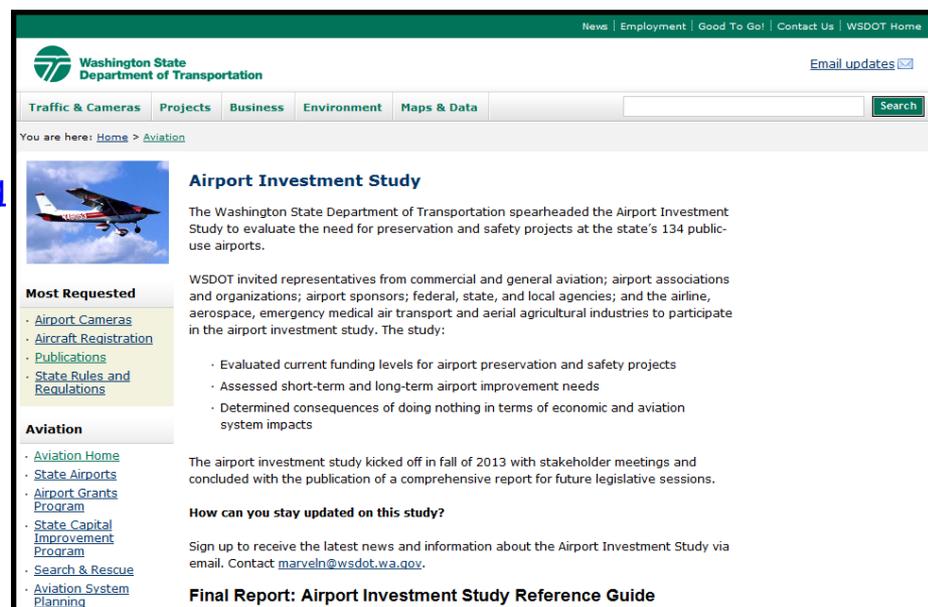
[Airport Investment Study folio](#)

[Airport Investment Study tackles funding options](#)

- **Related Articles**

[Washington State examines aviation needs, funding](#)

- **Presentations**



The screenshot shows the Washington State Department of Transportation website. The header includes the WSDOT logo and navigation links: News | Employment | Good To Go | Contact Us | WSDOT Home. A search bar is located in the top right. The main navigation menu includes: Traffic & Cameras, Projects, Business, Environment, Maps & Data. The breadcrumb trail reads: You are here: Home > Aviation. The main content area is titled "Airport Investment Study" and features a small image of an airplane. The text describes the study's purpose: "The Washington State Department of Transportation spearheaded the Airport Investment Study to evaluate the need for preservation and safety projects at the state's 134 public-use airports." A "Most Requested" sidebar lists links for Airport Cameras, Aircraft Registration, Publications, State Rules and Regulations, and Aviation. The Aviation section lists links for Aviation Home, State Airports, Airport Grants Program, State Capital Improvement Program, Search & Rescue, and Aviation System Planning. The main text continues: "WSDOT invited representatives from commercial and general aviation; airport associations and organizations; airport sponsors; federal, state, and local agencies; and the airline, aerospace, emergency medical air transport and aerial agricultural industries to participate in the airport investment study. The study:" followed by a bulleted list of findings: "Evaluated current funding levels for airport preservation and safety projects", "Assessed short-term and long-term airport improvement needs", and "Determined consequences of doing nothing in terms of economic and aviation system impacts". Below this, it states: "The airport investment study kicked off in fall of 2013 with stakeholder meetings and concluded with the publication of a comprehensive report for future legislative sessions." A section titled "How can you stay updated on this study?" includes a sign-up prompt: "Sign up to receive the latest news and information about the Airport Investment Study via email. Contact marveln@wsdot.wa.gov." At the bottom, there is a link to the "Final Report: Airport Investment Study Reference Guide".



GOALS AND OBJECTIVES

Goals and Objectives

The overall goal of the study is to develop a comprehensive basis of the past, current and forecast conditions for Washington State's public use airport infrastructure investments in order to identify and define significant gaps and consequences.

Key Study Objectives include:

- Evaluate current investment levels for airport preservation and safety projects
- Assess short-term and long-term statewide airport improvement needs
- Determine consequences of doing nothing in terms of economic and aviation system impacts



FUNDING AIRPORT INVESTMENTS

Funding Airports

Airport Funding Eligibility

Airport Type	Federal Entitlement Funds	Federal Air Cargo Apportionment Funds	Federal Discretionary Funds	Passenger Facility Charge Funds	State Grant Funds	Local Funds
NPIAS Primary	X		X	X	X	X
NPIAS Air Cargo	X	X	X		X	X
NPIAS Non-Primary	X		X		X	X
Non-NPIAS					X	X

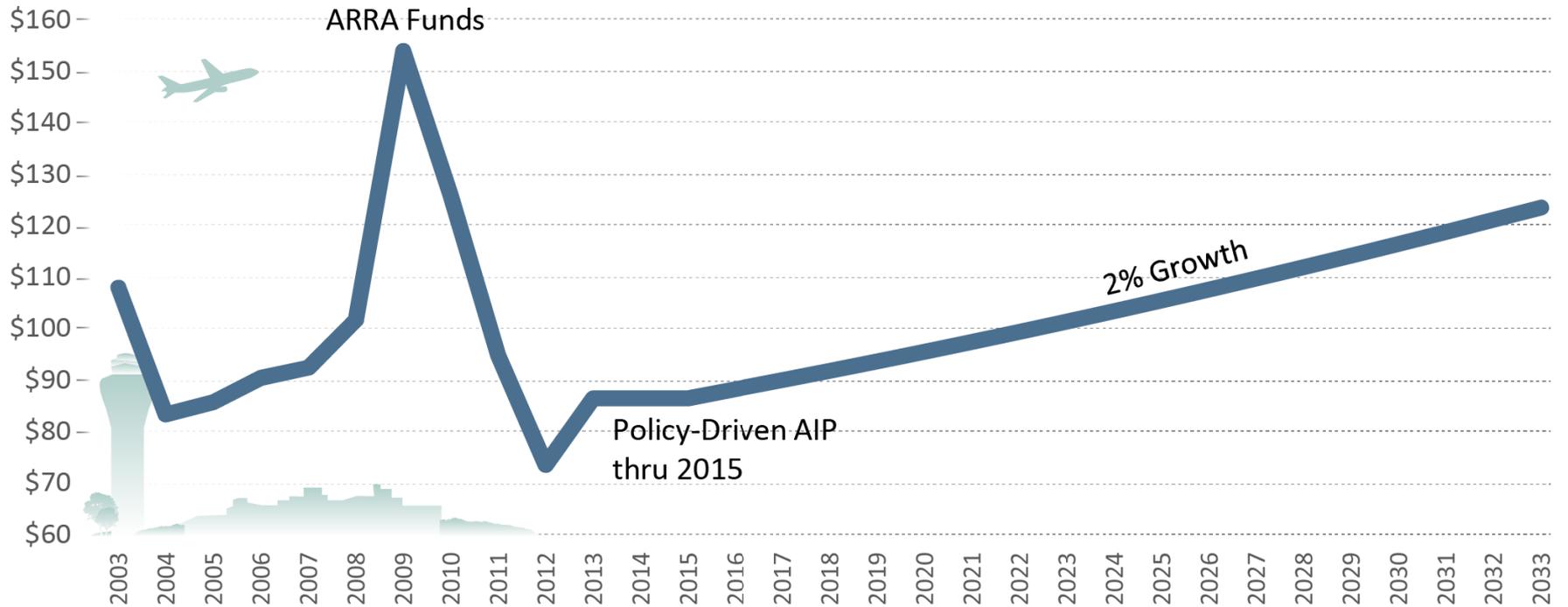
Definitions:

NPIAS = National Plan of Integrated Airport System (Federal Funds Eligible)

Non-NPIAS = Federal Funds Ineligible; state and local funding only

AIP Forecast

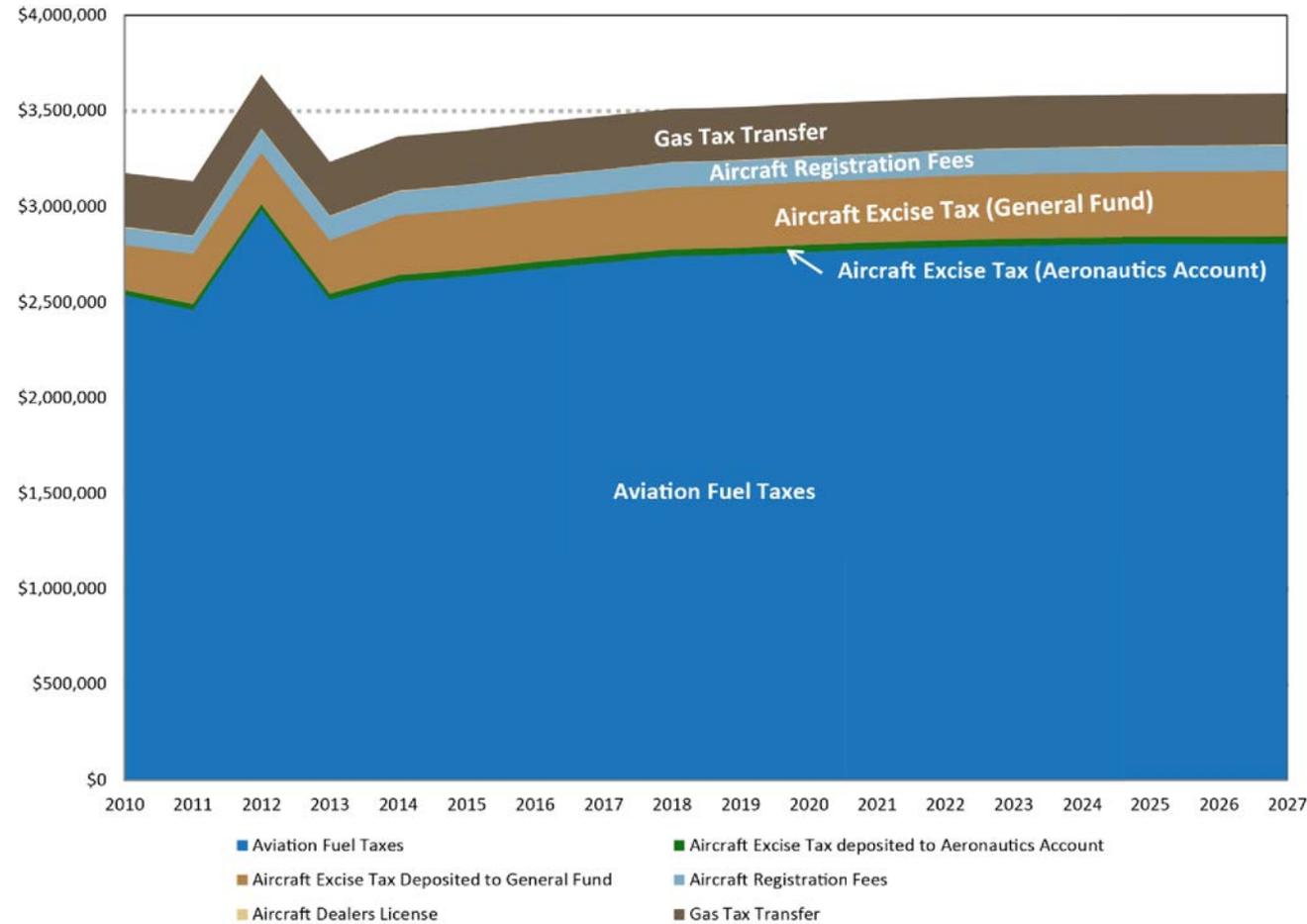
WA AIP Allocation Forecast



State Aviation Revenues Forecast

Transportation Revenue Forecast Council (TRFC) Forecast
0.8% annual average growth

It is estimated that ~\$1.4 million will be available for the airport aid program on an annual basis within the 20-year planning horizon.



Local Funds

- Typical funds
 - Passenger facility charges (PFCs)
 - Bond funds
 - General funds
 - Aeronautical/Non-Aeronautical
 - Other state and federal funds
- Applicability to airport categories

Airport Category	Aeronautical Revenues			Non-Aeronautical Revenues					Non-Airport Revenues		
	Passenger Facility Charge (PFC)	Leases/Landing/Ramp Fees	Aircraft Fuel Flowage	Terminal Concessions	Parking and Ground Transportation	Car Rentals	Advertising and Sponsorships	Commercial Development	Bond Proceeds	General Funds (Jurisdiction)	Other Federal and State Grants
Commercial Service	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	✓
<i>Reliability</i>	High	High	High	High	High	High	High	Low	Med	-	Low
<i>Revenue Potential</i>	Med-High	Med-High	Med-High	Med-High	Med-High	Med-High	Med-High	High	High	-	Med-High
Regional Service	N/A	✓	✓	✓	N/A	N/A	✓	✓	✓	✓	✓
<i>Reliability</i>	-	High	High	High	-	-	High	Low	Med	Med	Low
<i>Revenue Potential</i>	-	Low-Med	Low-High	Low-Med	-	-	Low	Med-High	High	Low-High	Med-High
Community Service	N/A	✓	✓	N/A	N/A	N/A	N/A	✓	✓	✓	✓
<i>Reliability</i>	-	High	High	-	-	-	-	Low	Med	Med	Low
<i>Revenue Potential</i>	-	Low-Med	Low-Med	-	-	-	-	Med-High	High	Low-Med	Med-High
Local Service	N/A	✓	✓	N/A	N/A	N/A	N/A	✓	✓	✓	✓
<i>Reliability</i>	-	High	High	-	-	-	-	Low	Med	Med	Low
<i>Revenue Potential</i>	-	Low	Low-Med	-	-	-	-	Med	High	Low-Med	Med-High
Rural Essential	N/A	✓	✓	N/A	N/A	N/A	N/A	N/A	✓	✓	✓
<i>Reliability</i>	-	High	High	-	-	-	-	-	Med	Med	Low
<i>Revenue Potential</i>	-	Low-Med	Low-Med	-	-	-	-	-	High	Low	Med-High
Seaplane Base	✓	N/A	N/A	✓	N/A	N/A	✓	N/A	✓	✓	✓
<i>Reliability</i>	High	-	-	High	-	-	High	-	Med	Med	Low
<i>Revenue Potential</i>	Med	-	-	Med	-	-	Med	-	High	Low	Med-High

Legend:

Reliability High = Continually Available Med = Intermittently Available Low = Competitive or Market-Driven Process Required

Revenue Potential High = >\$100k Med = \$10k to \$100k Low = <\$10k



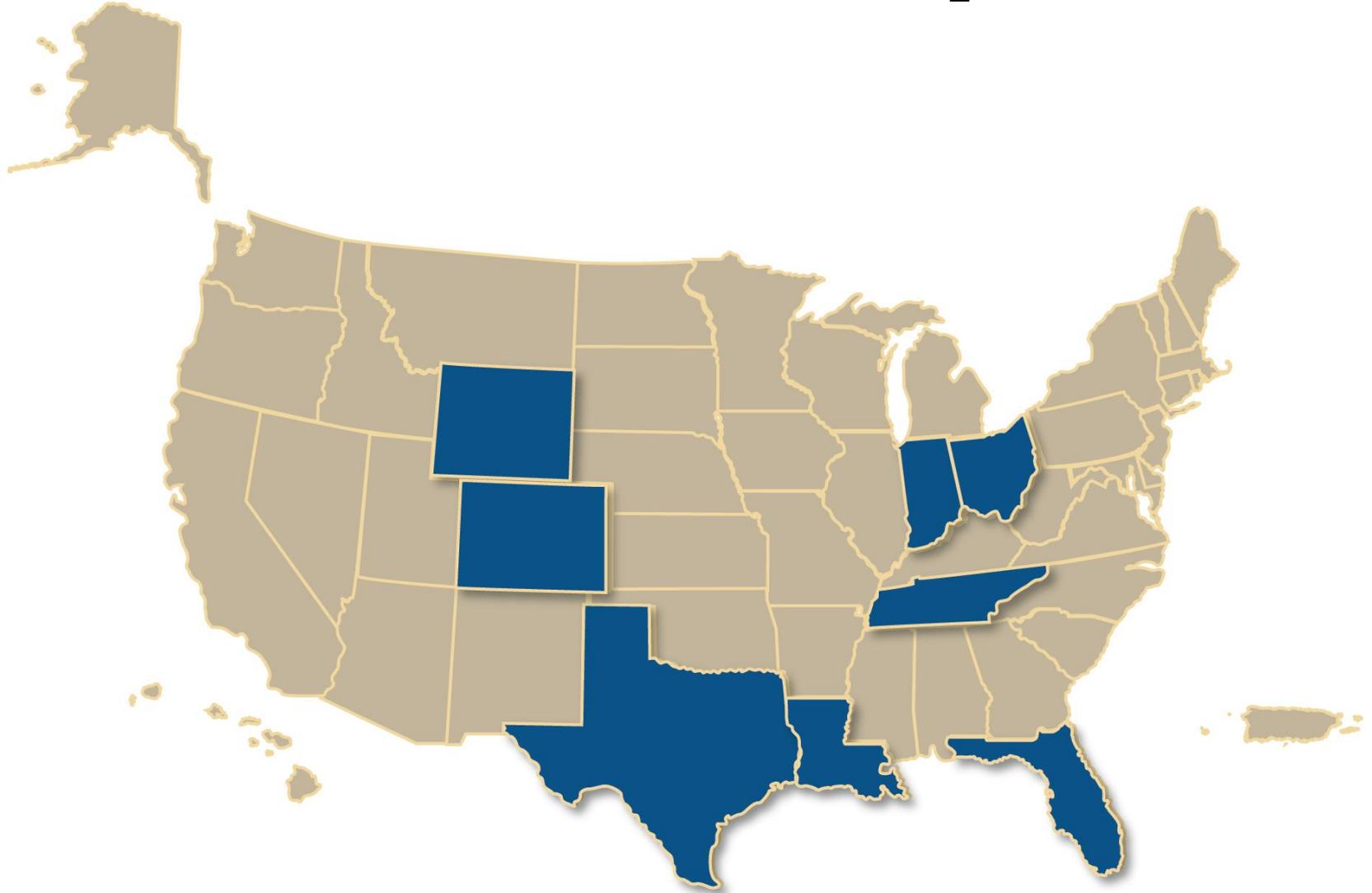
STATE TAXES COMPARISON

Common Aviation Taxes

- Aircraft Sales/Use Taxes
- Aircraft Registration Fees
- Personal Property Taxes
- Fuel Taxes

Over half of the states compared dedicate all or a portion of aviation fees and tax revenue to an aviation trust (airport aid) fund to help support aeronautical initiatives.

State Taxes Comparison



State Taxes Comparison

State Aviation Funding Analysis

STATE	NPIAS AIRPORTS	NON-NPIAS AIRPORTS	BASED AIRCRAFT	ANNUAL AVIATION PROGRAM FUNDING	FUNDING PER AIRPORT	FUNDING PER AIRCRAFT
Colorado	49	27	4,565	\$20,100,000	\$264,400	\$4,400
Florida	100	29	10,931	\$130,000,000	\$1,008,000	\$11,900
Indiana	65	42	3,064	\$2,400,000	\$22,400	\$780
Louisiana	56	19	2,164	\$28,800,000	\$348,000	\$13,300
Ohio	100	69	4,395	\$1,100,000	\$6,500	\$250
Tennessee	69	12	2,724	\$4,000,000	\$49,400	\$1,500
Texas	209	187	11,535	\$10,800,000	\$27,300	\$900
Washington	64	70	5,963	\$1,100,000	\$8,200	\$180
Wyoming	33	8	938	\$8,500,000	\$207,300	\$9,000

- WA is the only state with more Non-NPIAS airports than NPIAS airports
- WA has one of the highest number of based aircraft per NPIAS airport
- Dramatic difference in aviation funding between states
- WA aviation funding is among the lowest, based on airports and aircraft



AIRPORT INVESTMENT NEEDS

Airport Investment Needs

Data Sources

- Statewide Capital Improvement Program (SCIP)
- Master Plans
- Airport Layout Plans (ALP)
- Airport Pavement Management System (APMS)
- PSRC's NextGen Study
- FAA Master Record Form 5010

The goal of the airport investment needs portion of the Airport Investment Study (AIS) is to develop and document a clear and defensible method for establishing an overall total capital need for the short-term (0-5 years) and long-term (6-20 years) planning periods.

Airport Investment Needs

Data Validation

- Airport surveys
 - General information (existing and future)
 - Short- and long-term capital projects
 - Aviation related activities & public benefits
 - Local airport funding resources and issues



WASHINGTON AIRPORT INVESTMENT STUDY

**WA AIRPORT INVESTMENT STUDY
AIRPORT SURVEY**

AIRPORT: ABC AIRPORT
 AIRPORT MGR: JOHN SMITH
 PHONE: XXX-XXX-XXXX
 EMAIL: JOHNSMITH@ABC-AIRPORT.COM

Part 1. General Information: *Please verify or correct the following information from WSDOT's Airport Information System (AIS) for the most critical aircraft and runway operation at your airport:*

	Existing	Future (Planned)
Approach Type:	Non-Precision Approach	Non-Precision Approach
Approach Category:	B: Approach speed 91 knots or more but less than 121 knots	B: Approach speed 91 knots or more but less than 121 knots
Airplane Design Group:	ADG I - Tail Height <20'; Wingspan <49'	ADG I - Tail Height <20'; Wingspan <49'
Visibility Minimums:	Greater than 1 mile (NPA)	Greater than 1 mile (NPA)
Critical Design Aircraft:	Beechcraft Baron B58	Beechcraft Baron B58
Runway Width:	60'	60'

Part 2. Short and Long-Term Planning Information: *Please verify, correct and provide the following information:*

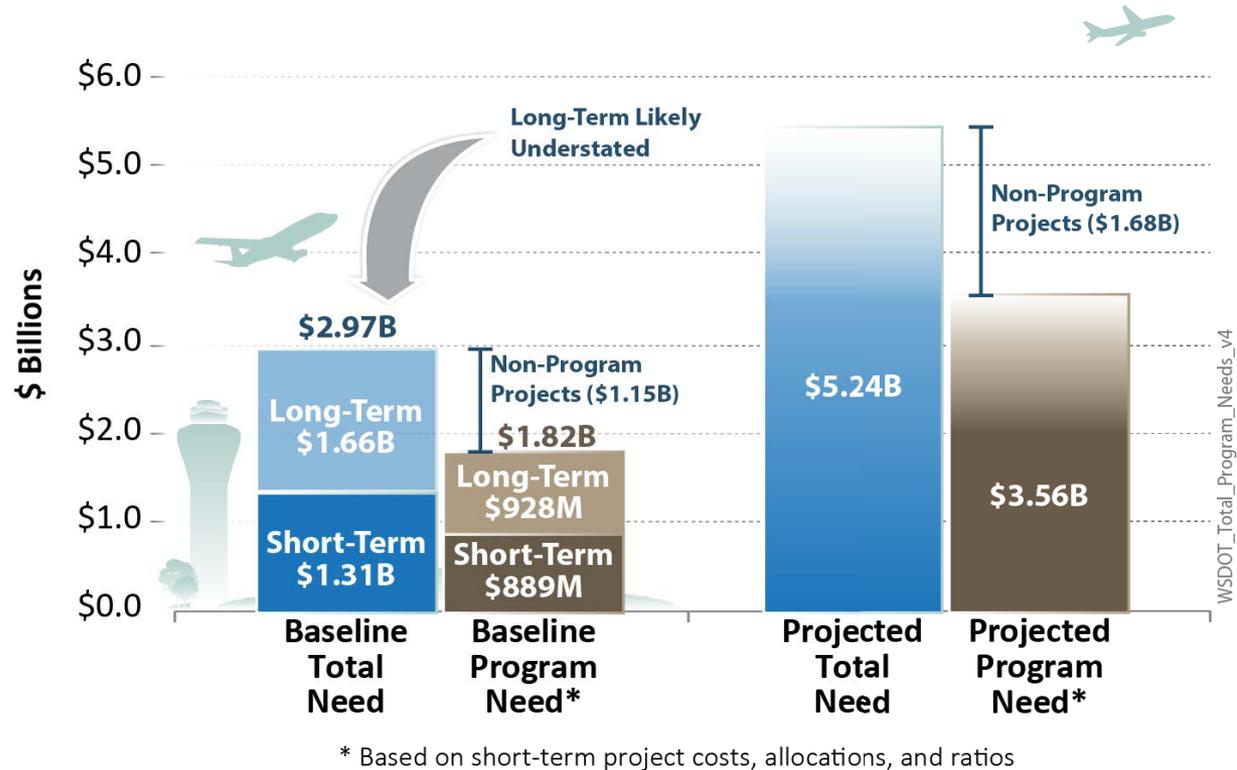
A. Do you have a Master Plan/Narrative report?	YES	Last updated?	2008
B. Do you have an ALP?	YES	Last updated?	2008
C. If you are currently preparing a Master Plan update:			
1. When is it anticipated to be completed? Master Plan Update is programmed for 2016			
2. Who is preparing it? Future RFQ/RFP			
D. Do you have known deficiencies in FAA Design Standards (AC 150/5300-13A – Airport Design)? Please select and or list non-standard items and proposed mitigation below, if any:			
Non-Standard Item	Description	Proposed Mitigation	
Airfield Geometry	Taxiway C – No Shoulder	Construct 10' Shoulder Each Side, Full Width	
SELECT HERE	Click here to enter text.	Click here to enter text.	
SELECT HERE	Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.	

PAGE 1 OF 5

Airport Investment Needs

Summary of Statewide Need

- Baseline Program Need
 - From Project Data
 - Excludes Ineligible
- Projected Program Need
 - Projects short-term
 - Excludes Ineligible



20-year Projected Program Need: \$3.6 Billion



CONSEQUENCES OF PERPETUATING THE 'STATUS QUO'

Discovering the Gap

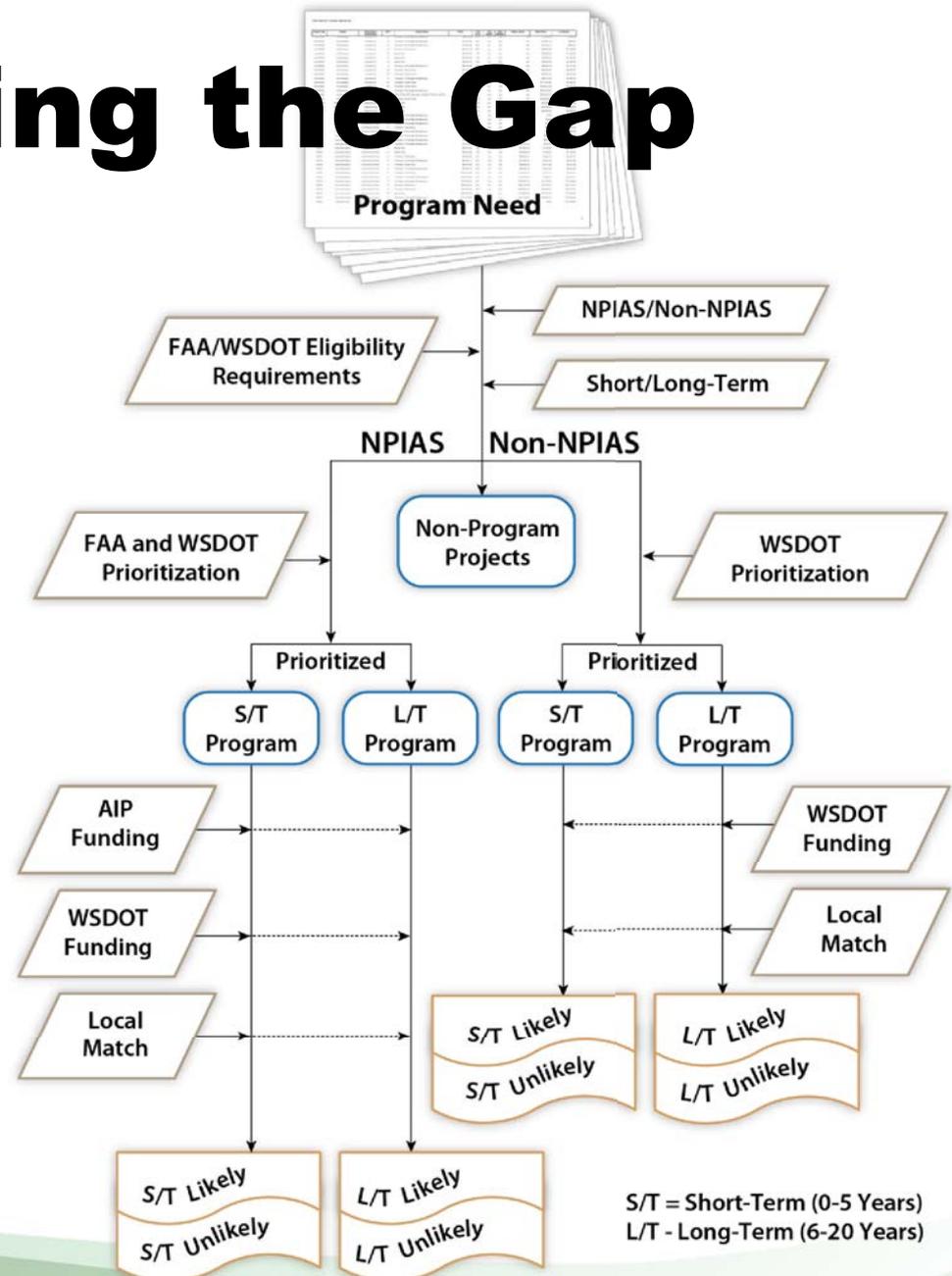
Application of Forecast Funding to Statewide Need

- Forecast FAA Funding
 - Short-Term: \$444 million
 - Long-Term: \$1.62 billion
 - **Total: \$2.1 billion**
- Forecast State Funding
 - Short-Term: \$7 million
 - Long-Term: \$21 million
 - **Total: \$28 million**

Discovering the Gap

Process

- Project Definition
 - NPIAS/Non-NPIAS
 - Eligible/Ineligible
 - Short/Long-Term
- Project Prioritization
 - WSDOT and FAA
- Available Funding Application
 - FAA and/or WSDOT
 - Local Match Assumptions



Funding Split for Eligible Projects

- Project costs divided by funding share
- Federal funding available for NPIAS airports only
- 100% Local funding for ineligible projects

Eligibility	Federal Percent Share	State Percent Share*	Local Percent Share
Federal Only	90%	0%	10%
State Only	0%	95%	5%
Federal and State	90%	5%	5%

*Up to \$250,000 per project.

Examples of Eligible and Ineligible Projects

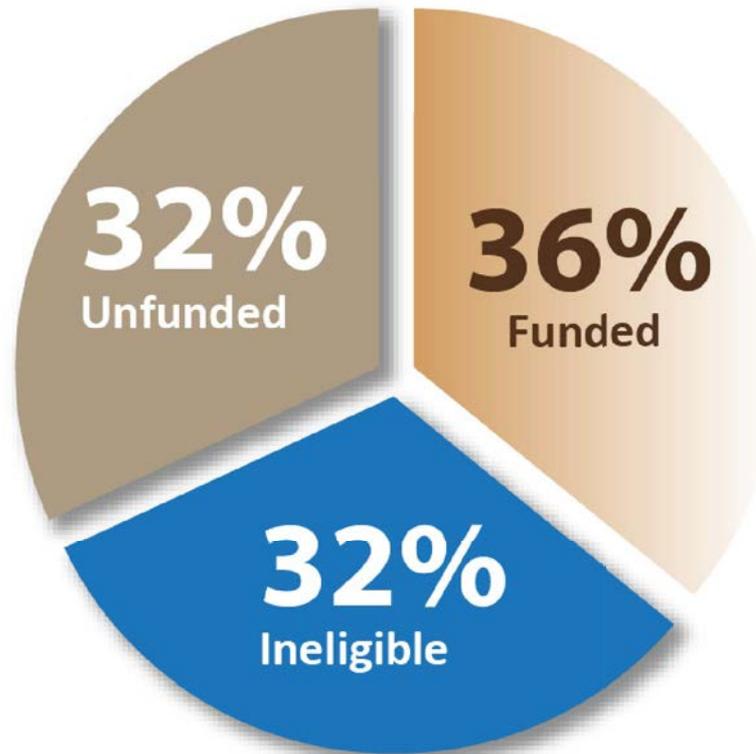
Eligible Projects	Ineligible Projects
Runway construction/rehabilitation	Maintenance equipment and vehicles
Taxiway construction/rehabilitation	Office and office equipment
Apron construction/rehabilitation	Fuel farms*
Airfield lighting	Landscaping
Airfield signage	Artworks
Airfield drainage	Aircraft hangars*
Land acquisition	Industrial park development
Weather observation stations (AWOS)	Marketing plans
NAVAIDs such as REILs and PAPIs	Training
Planning studies	Improvements for commercial enterprises
Environmental Studies	Maintenance or repairs of buildings
Safety area improvements	
Airport layout plans (ALPs)	
Access roads only located on airport property	
Removing, lowering, moving, marking, and lighting hazards	
Glycol recovery trucks/glycol vacuum trucks** (11/29/2007)	

Project Funding Share Responsibility

Short-term and Long-term (Projected) Need Funding Share Responsibility

Short-Term Need	Total Cost	Federal Share	State Share	Local Share
Likely Funded	\$474,505,031.00	\$420,883,975.50	\$18,233,811.30	\$35,387,244.20
Likely Unfunded	\$414,942,531.00	\$321,928,107.60	\$42,225,958.50	\$50,788,464.90
Ineligible	\$422,168,921.00	\$ -	\$ -	\$422,168,921.00
Total	\$1,311,616,483.00	\$742,812,083.10	\$60,459,769.80	\$508,344,630.10
Long-Term Need (Projected)	Total Cost	Federal Share	State Share	Local Share
Likely Funded	\$1,423,515,093.00	\$1,262,651,926.50	\$54,701,433.90	\$106,161,732.60
Likely Unfunded	\$1,244,827,593.00	\$965,784,322.80	\$126,677,875.50	\$152,365,394.70
Ineligible	\$1,266,506,763.00	\$ -	\$ -	\$1,266,506,763.00
Total	\$3,934,849,449.00	\$2,228,436,249.30	\$181,379,309.40	\$1,525,033,890.30
Total Need (Projected)	Total Cost	Federal Share	State Share	Local Share
Likely Funded	\$1,898,020,124.00	\$1,683,535,902.00	\$72,935,245.20	\$141,548,976.80
Likely Unfunded	\$1,659,770,124.00	\$1,287,712,430.40	\$168,903,834.00	\$203,153,859.60
Ineligible	\$1,688,675,684.00	\$ -	\$ -	\$1,688,675,684.00
Total	\$5,246,465,932.00	\$2,971,248,332.40	\$241,839,079.20	\$2,033,378,520.40

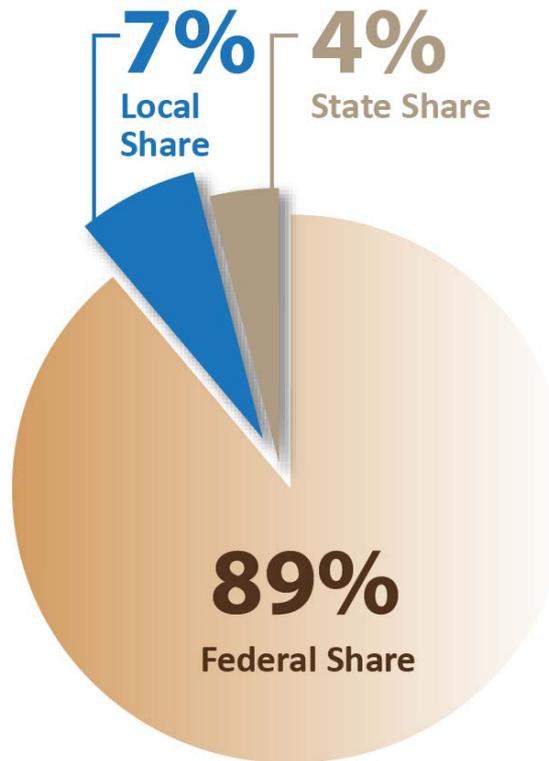
Discovering the Gap



WSDOT_Total_Fund_Projected_v1

**Projected Program
Need**

Discovering the Gap

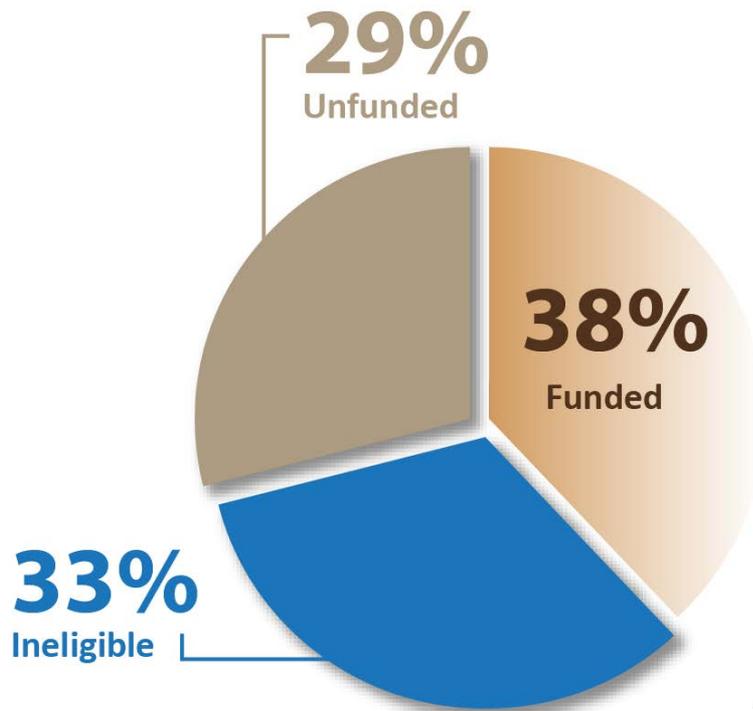


WSDOT_Gap_State_Funded_v1

Total Share of Funded Projects – Projected Program

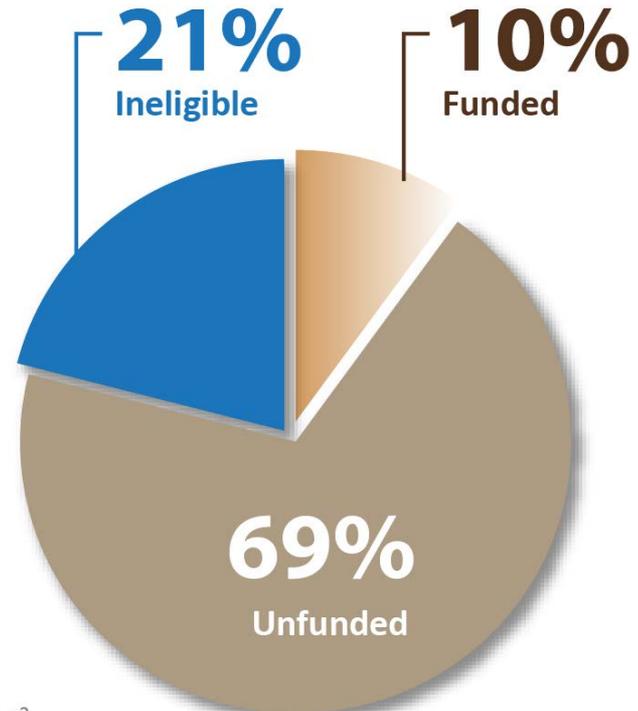
The short-fall in State funding creates a greater responsibility for local funding. In many cases, the study found that the State is unable to contribute its 5% match for eligible projects at NPIAS airports under the State Grant Aid Program.

Discovering the Gap



**NPIAS Funding Status
- Projected Program**

WSDOT_Gap_NPIAS_v2



**Non-NPIAS Funding Status
- Projected Program**

Discovering the Gap

Summary

- The 20-year funding gap is significant - \$1.7 billion

	Program Need (from Study Data) (\$ Millions)			Program Need (from Projected Data) (\$ Millions)		
	NPIAS	Non-NPIAS	TOTAL	NPIAS	Non-NPIAS	TOTAL
Program Need	1,715	102	1,817	3,359	198	3,557
Likely to be Funded	1,328	12	1,340	1,887	11	1,898
Unlikely to be Funded	387	90	477	1,472	187	1,659

Gap Summary

Gap Summary – Projected Program Need

20-year Statewide Need	\$3,557,790,248.00
20-year Statewide Need State Share*	\$241,839,079.20
20-year Gap	\$1,659,770,124.00
20-year Gap State Share	\$168,903,834.00
Average Annual Need	\$177,889,512.40
Average Annual Need State Share	\$12,091,953.96
Average Annual Gap	\$82,988,506.20
Average Annual Gap State Share	\$8,445,191.70

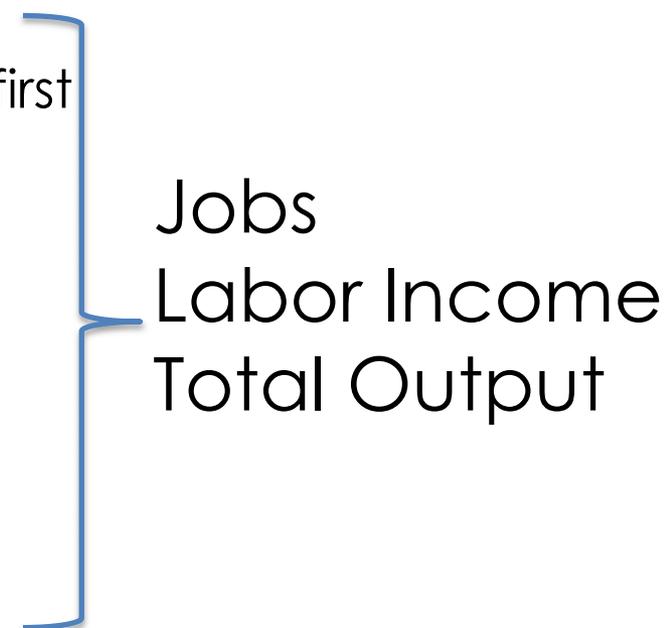
*Excludes SeaTac Airport Projects

Impacts of Funding Gap

- Economic Impacts
 - Jobs, Wages, Total Economic Output
 - Tax Revenue
- Impacts to Aviation Activities
- Impacts to Airport Operations and Facilities

Economic and Revenue Impacts

- Direct Impacts
 - Money from on-airport construction first circulated
- Indirect/Induced
 - Recirculated into the economy from construction
- Total Impact
 - Sum of direct and indirect/induced
- Tax Revenues
 - Sales/Use Tax
 - Sales Tax from Jobs
 - B&O Tax



Economic Impacts Summary

	Program Need (\$3.6B)	Likely Funded Projects (\$1.9B)	Consequences (\$1.7B)
Economic Impacts			
Jobs	29,144	15,538	13,606
Labor Income	\$1.6 Billion	\$0.9 Billion	\$0.7 Billion
Total Output	\$4.2 Billion	\$2.2 Billion	\$2.0 Billion
Tax Revenues	\$159 Million	\$85 Million	\$74 Million

Consequences Analysis of Funding Gap

- Impacts to Aviation-Related Activities
- Impacts to Airport Operations and Facilities
- Methodology
 - Project Needs by Project Component and Purpose
 - Pairwise Comparison Analyses
 - Airport Weighting
 - Relative Percent Funded

Defined Consequences of Funding Gap

Impact	Range		Consequences Definitions
Minimally Affected	(81 - 100% Funded)		Airport can afford to implement their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a high level. Airport is also able to plan and construct improvements to fully meet projected 20-year demands.
Moderately Affected	(61 - 80% Funded)		Airport can largely afford to implement their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a moderate-to-high level. Airport may need to defer the planning and construction of some improvements needed to fully meet projected 20-year demands.
Largely Affected	(41 - 60% Funded)		Airport can only partially afford to implement their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a moderate level. Airport will have to defer lower priority maintenance projects and will need to defer the planning and construction of most improvements needed to meet projected 20-year demands.
Seriously Affected	(21 - 40% Funded)		Airport cannot afford to implement the majority of their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a low level. Airport will have to defer most maintenance projects and will not be able to plan or construct improvements to meet projected 20-year demands.
Completely Affected	(0 - 20% Funded)		Airport cannot afford to implement their planned capital improvement plan. Airport is not able to maintain their operations and facilities. Airport will have to defer all but a few maintenance projects and will not be able to plan or construct improvements to meet projected 20-year demands.

Aviation Related Activities Impacts

Seventeen Aviation- Related Activities

1. Commercial Passenger Service
2. General Aviation: Business and Corporate Travel
3. General Aviation: Personal Transportation
4. Pilot Training and Certification
5. Air Cargo
6. Blood, Tissue and Organ Transportation
7. Medical Air Transport
8. Search and Rescue
9. Firefighting
10. National Security
11. Emergency Preparedness and Disaster Response
12. Scientific Research
13. Aerial Photography
14. Aircraft Manufacturing
15. Agriculture
16. Aerial Sightseeing
17. Skydiving

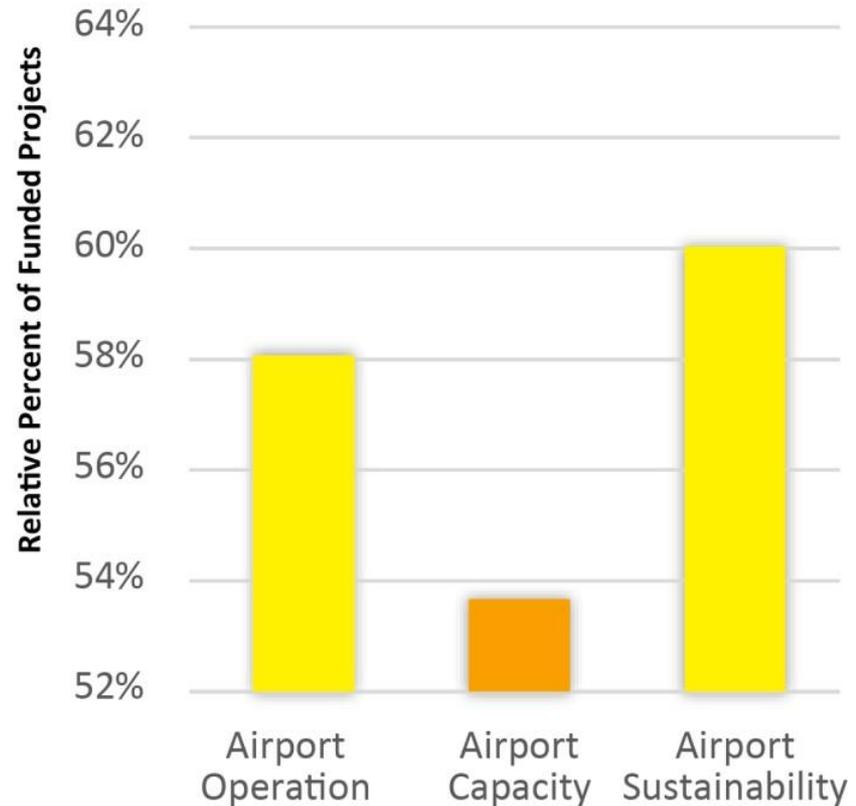
Aviation-Related Activities Impacts

- Activities will be moderately to largely affected
- Projects associated with promoting commercial passenger service and life safety activities rank highest
- Projects supporting non-commercial passenger service aviation-related businesses and recreational activities suffer

Aviation-related Activity	Projected Program Need Impacts
Skydiving	Orange
Aerial Sightseeing	Orange
Agriculture	Green
Aircraft Manufacturing	Orange
Aerial Photography	Orange
Scientific Research	Orange
Emergency Preparedness and Disaster Response	Yellow
National Security	Orange
Firefighting	Yellow
Search and Rescue	Yellow
Medical Air Transport	Yellow
Blood Tissue and Organ Transportation	Orange
Air Cargo	Orange
Pilot Training	Yellow
General Aviation – Personal Transportation	Orange
Commercial Service	Yellow
General Aviation – Business and Corporate Travel	Orange

Operations, Capacity and Sustainability Impacts

- Airport Operations, Capacity and Sustainability will be moderately to largely affected
- Projects supporting airport infrastructure expansion and regulatory compliant airport operations are further strained.



Airport Facilities Impacts

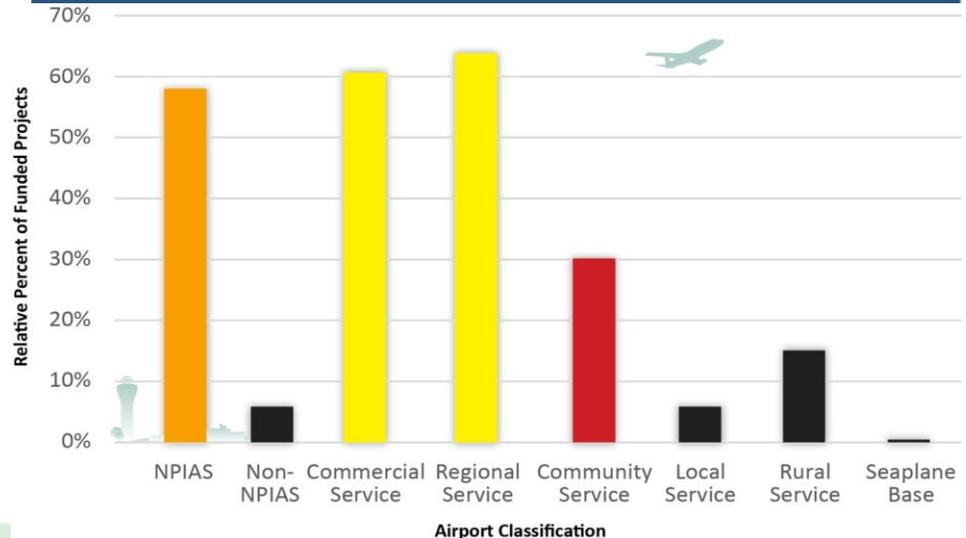
- Airports are only able to focus on the core infrastructure
- Airports are only able to maintain their facilities at a reduced level
- From the analysis, runway and taxiway-related projects are least impacted

Airport Component (Facility)	Projected Program Need Impacts
AP - Apron	Red
BD - Building	Black
EQ - Equipment	Red
FI - Financing	Black
GT - Ground Transportation	Black
HE - Helipad	Black
HO - Homes	NA
LA - Land	Black
NA - New Airport	NA
OT - Other	Red
PB - Public Building	Black
PL - Planning	Orange
RW - Runway	Yellow
SB - Seaplane Base	Green
TE - Terminal	NA
TW - Taxiway	Green
VT - Vertiport	NA

Impacts by Airport Classification

- Larger NPIAS Airports Moderately Affected
 - Benefit from Federal funding
 - State funding not keeping up with Federal match
- Small and Non-NPIAS Airports Seriously to Completely Affected
 - State funding inadequate
 - Local funding cannot support 100% of project costs

Airport Classification	Projected Program Need Impacts
NPIAS	Orange
NON-NPIAS	Black
Commercial Service	Yellow
Regional Service	Yellow
Community Service	Red
Local Service	Black
Rural Service	Black
Seaplane Base	Black



Next Steps

- Airport Investment Study Solutions project
 - Underway! CH2M Hill NTP May 6, 2014
 - Solutions project will:
 - Seek input from the Advisory Committee
 - Solicit both funding and non-funding solutions
 - Screen proposed solutions by determining if they are **Feasible, Acceptable** and **Suitable**
 - Evaluate and Prioritize solutions by applying **Evaluation Criteria**
 - Analyze **ten solutions** (SWOT, implementation strategies)
 - Study complete in December, 2014



Contact Information

Tristan Atkins
WSDOT Director of Aviation
360-709-8020
AtkinsTK@wsdot.wa.gov

Rob Hodgman
WSDOT Aviation Senior Planner
Airport Investment Study Project Manager
360-596-8910
Hodgman@wsdot.wa.gov

Website:

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



QUESTIONS?