Regional Aviation Baseline Study

Puget Sound Regional Council
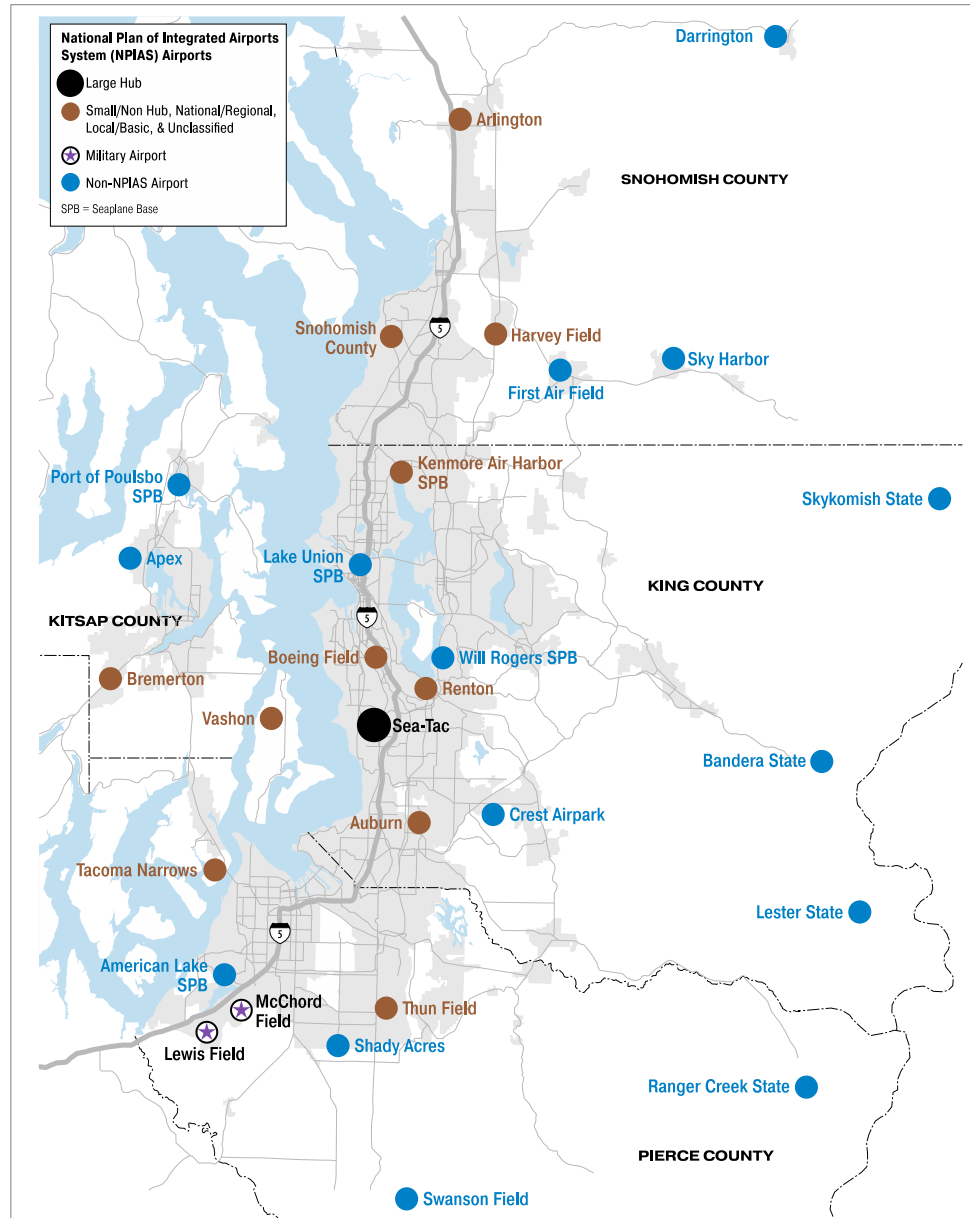
Regional Aviation Baseline Study

Study Objectives

— Identify the roles of each airport and the aviation activities within the region based on existing planning efforts

— Provide a regional perspective on how aviation activities at airports in the region interact with each other, the community and the broader economy

— Obtain input from stakeholders about their needs and build a common understanding about aviation and airspace constraints

— Identify future aviation needs within the central Puget Sound Region and set the stage for future planning

Study Area: 29 Regional Airports

National Plan of Integrated Airports System (NPIAS) Airports
- Large Hub
- Small/Non Hub, National/Regional, Local/Basic, & Unclassified
- Military Airport
- Non-NPIAS Airport

SPB = Seaplane Base

SNOHOMISH COUNTY
Darrington
Arlington
Snohomish County
Harvey Field
Sky Harbor
First Air Field

KING COUNTY
Port of Poulsbo SPB
Kenmore Air Harbor SPB
Skykomish State
Apex
Lake Union SPB
KITSAP COUNTY
Boeing Field
Will Rogers SPB
Bremerton
Renton
Vashon
Sea-Tac
Bandera State
Auburn
Crest Airpark
Tacoma Narrows
Lester State
American Lake SPB
McChord Field
Thun Field
Lewis Field
Shady Acres
Ranger Creek State
PIERCE COUNTY
Swanson Field

Air travel struggles to regain pre-pandemic altitude

Flying hit its low point at Seattle-Tacoma International Airport in mid-April. Passenger volume has since doubled, but last week the number of passengers screened was still one-sixth of its late January level. Airlines, however, are operating more than 35% of the flights they did in January.
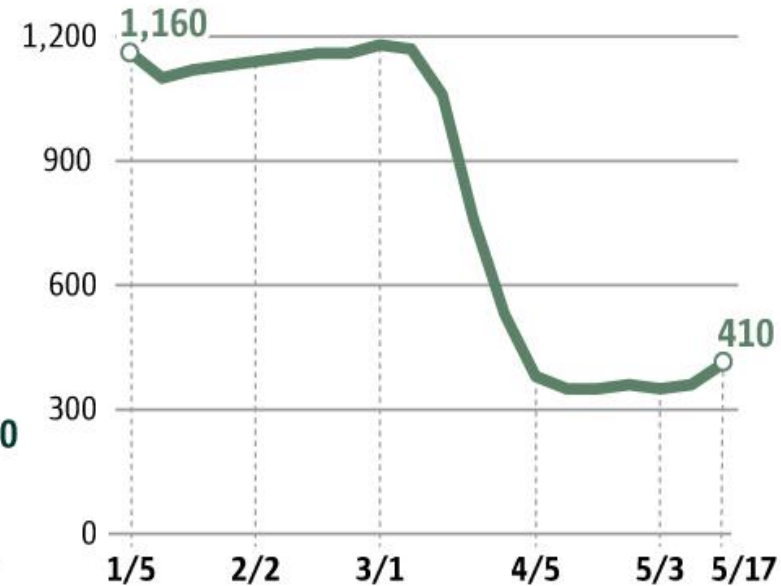
Weekly totals, Sunday through Saturday

TSA screened passenger volume

Aircraft operations

42,500

6,900

1,160

410
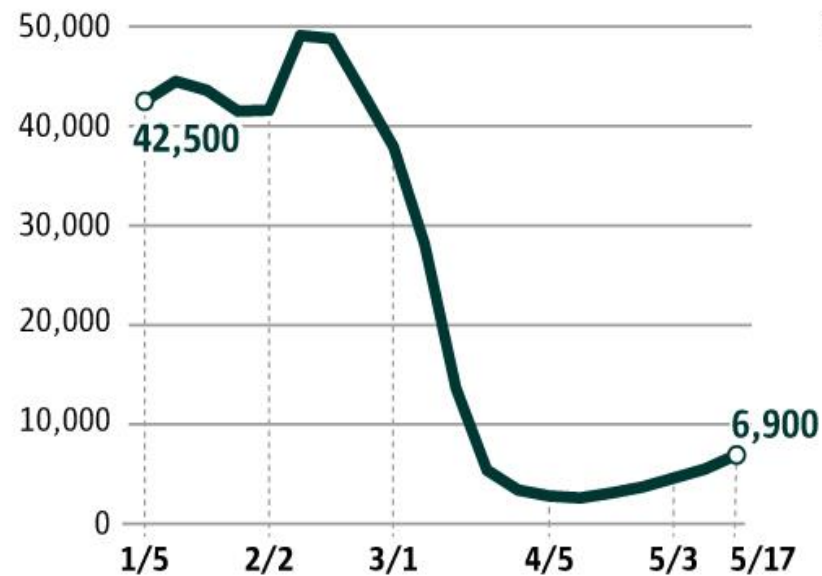
Source: Port of Seattle

THE SEATTLE TIMES

Commercial Forecast

Enplanements in the Central Puget Sound Region (millions)

55.6 (high forecast)

49.3 (low forecast)
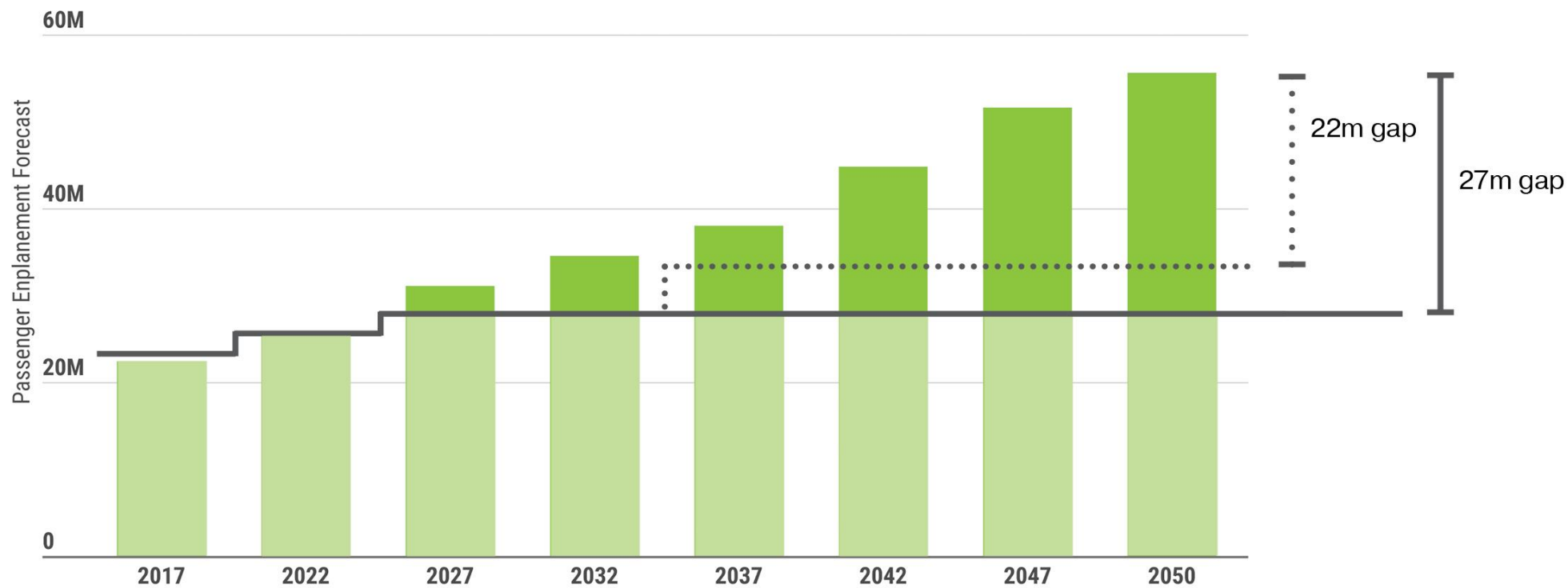
24.0

2018

2050
Unconstrained

Source: WSP USA Analysis. Enplanements = passenger boardings

Commercial Service Gap Analysis

Combined Sea-Tac and Paine Field Commercial Capacity/Demand

Passenger Enplanement Forecast

60M

40M

20M

0

2017 2022 2027 2032 2037 2042 2047 2050

22m gap

27m gap

——— Includes Sea-Tac 2027 SAMP Near Term Projects

········ Includes Sea-Tac SAMP Long Term Vision Projects

Commercial Service Gap Analysis

Assessment of commercial service passenger needs through 2050

Puget Sound Central Region	Forecast of passenger enplanements			
	2017	**2022**	**2027**	**2050**
Passenger enplanements (high forecast)	22,450,500	25,400,000	31,100,000	55,600,000

Source: WP #1, WSP
Note: Low forecast for 2050 is 49,300,000 enplanements based on unconstrained forecast

PAE + Sea-Tac	Potential passengers accommodated			
	2017	**2022**	**2027**	**2050**
1-Constrained 2027 SAMP Near Term Projects Scenario[1,2]	23,050,000	25,655,000	28,600,000	28,600,000
2-Constrained SAMP Long Term Vision Scenario[1,3]	23,050,000	25,655,000	28,600,000	33,600,000

Source: SAMP 2016, PAE Supplemental EA, 2018

Puget Sound Central Region	Gap (demand-supply)			
	2017	**2022**	**2027**	**2050**
1-Constrained 2027 SAMP Near Term Projects Scenario[1,2]	559,500	255,000	-2,500,000	-27,000,000
2-Constrained SAMP Long Term Vision Scenario[1,3]	599,500	255,000	-2,500,000	-22,000,000

Note:
[1]Assumes PAE accommodates 600,000 annual enplanements, per Supplemental EA
[2]Based on Sea-Tac SAMP Near-Term Projects, accommodating up to 28 million annual enplaned passengers
[3]Based on Sea-Tac SAMP Long-Term Vision, possibly accommodating up to 33 million annual enplaned passengers

Study Phases

Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020

Technical Analysis

Airport & Aviation Activity
- ✓ Existing conditions
- ✓ Aviation sector analysis
- ✓ Regional forecasts

Aviation Issues Analysis
- ✓ Airspace flow analysis
- ✓ Future capacity needs
- • Economic analysis

Scenario Evaluation

- Identify & evaluate future scenarios
- Summary of community perspectives
- Identify next steps

Project Completion

- Publish Final Report

Public Involvement

Stakeholder outreach meetings	
Technical Working Group	Media briefings
	Community meetings
	Public survey
	Online open house

Today's Briefing

- Scenario Development
- Economic Analysis
- Airport Analysis

Scenarios to meet 2050 commercial demand

Scenario	2050 Passenger Capacity	% of 2050 Capacity Met
Scenario 1: Baseline Sea-Tac implements near-term 2027 SAMP	28 million	51%
Scenario 2: Sea-Tac Long-Term Vision Sea-Tac implements long-term 2037 vision	33 million	60%
Scenario 3: Accommodate 50% of Projected Gap Baseline + Accommodating 50% of Projected Gap	44 million	80%
Scenario 4: Accommodate 100% of Projected Gap Baseline + Accommodating 100% of Projected Gap	55 million	100%

Scenario 1: Baseline

Existing Commercial Facilities

— Sea-Tac: Implements near-term 2027 SAMP

— Paine Field: Maintains current capacity

New Commercial Airports

— No new commercial airports

2050 Demand

— 51% of demand met

— 27,000,000 passenger boardings gap

Scenario 2: Sea-Tac Long-Term Vision

Existing Commercial Facilities

— Sea-Tac: Implements long-term 2037 Vision

— Paine Field: Maintains current capacity

New Commercial Airports

— No new commercial airports

2050 Demand

— 60% of demand met

— 22,000,000 passenger boardings gap

Scenario 3: Accommodate 50% of Projected Gap

Existing Commercial Facilities

— Sea-Tac: Implements near-term 2027 SAMP

— Paine Field: Maintains current capacity

New Commercial Airports

— 1-2 new commercial airports

2050 Demand

— 80% of demand met

— 11,000,000 passenger boardings gap

Scenario 3: Options for new commercial airports
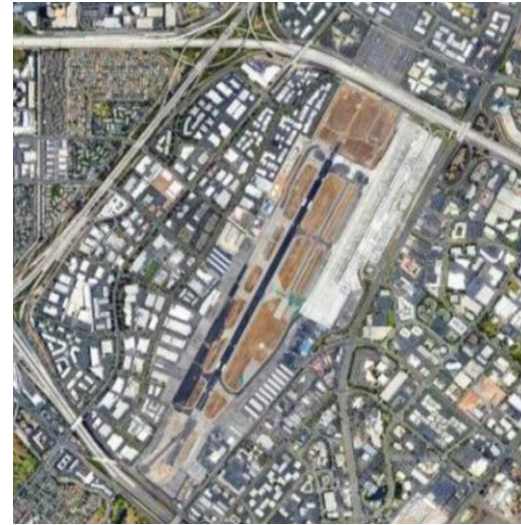
One airport with two runways
(examples)

Two airports with single runway
(examples)

San Jose International

Sacramento International

John Wayne

Bellingham International

Scenario 4: Accommodate 100% of Projected Gap

Existing Commercial Facilities

— Sea-Tac: Implements near-term 2027 SAMP

— Paine Field: Maintains current capacity

New Commercial Airports

— 1-3 new commercial airports

2050 Demand

— 100% of demand met

— 0 passenger boardings gap

Scenario 4: Options for new commercial airports

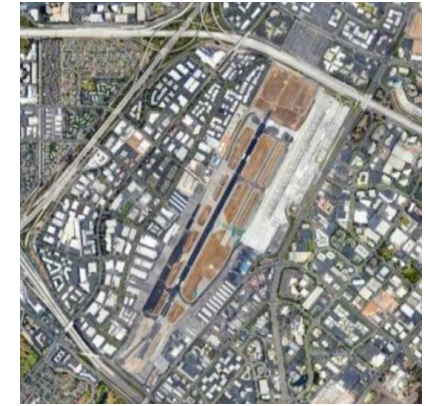## One airport with three runways
(example)

Sea-Tac International

Multiple airports totaling three runways

Impact of Scenarios

Scenario			
Baseline	**Sea-Tac Long-Term Vision**	**Accommodate 50% of Gap**	**Accommodate 100% of Gap**
2050 Capacity			
28m boardings 51% of demand met	33m boardings 60% of demand met	44m boardings 80% of demand met	55m boardings 100% of demand met
Economic Impact			
$22b lost annual impact 150k lost jobs	$18b lost annual impact 122k lost jobs	$11b lost annual impact 75k lost jobs	**$0** lost annual impact **0** lost jobs

System Access & Performance

Lower population access Increased delay			Higher population access Decreased delay

Community & Environmental Impacts

Fewer added impacts			More added impacts
More concentrated impacts			More distributed impacts

Airport Evaluation Criteria

All 29 regional airports were analyzed for the ability to potentially accommodate commercial air service.

Evaluation criteria included:

— Ability to accommodate at minimum one 7,000 ft. runway

— Airspace analysis

— Flood zone constraints

— Ownership considerations (ie: public, private, military)

— Airfield capacity

— Impact to aerospace manufacturing

— Transportation infrastructure

— Proximity to population and jobs

Airport Screening

Reasons for some airports to be dropped from consideration:

— **Renton Municipal**: airspace conflicts, airfield capacity, manufacturing impacts, inability to accommodate 7,000 ft

— **Boeing Field**: airspace conflicts

— **McChord Field**: ownership constraints

— **Auburn Municipal and Thun Field**: inability to accommodate 7,000 ft runway

— **Harvey Field**: located in floodplain

Airports with potential to provide commercial capacity

—Arlington Municipal

—Bremerton National

—Paine Field

—Tacoma Narrows

Note: First step to potentially for any current airport to provide commercial air service is for the airport owner to conduct an FAA Airport Master Plan with a commitment from at least one airline to serve the airport.

Airport proximity to population & jobs (2050)

Airport	Population <60 mins. drive time		Employment <60 mins. drive time	
	#	% of total	#	# of total
Sea-Tac	2,473,000	42%	1,914,000	57%
Paine Field	2,286,000	39%	1,323,000	40%
Arlington Municipal	895,000	15%	407,000	12%
Bremerton Municipal	814,000	14%	412,000	12%
Tacoma Narrows	1,679,000	29%	735,000	22%

Airport proximity to population & jobs (2050)

Airports	Population <60 mins. drive time		Employment <60 mins. drive time	
	#	% of total	#	# of total
Paine Field + Sea-Tac	4,090,000	70%	2,682,000	80%
+ Arlington Municipal	4,134,000	71%	2,689,000	80%
+ Bremerton Municipal	4,904,000	84%	3,088,000	92%
+ Tacoma Narrows	5,333,000	92%	3,179,000	95%

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Thank you

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