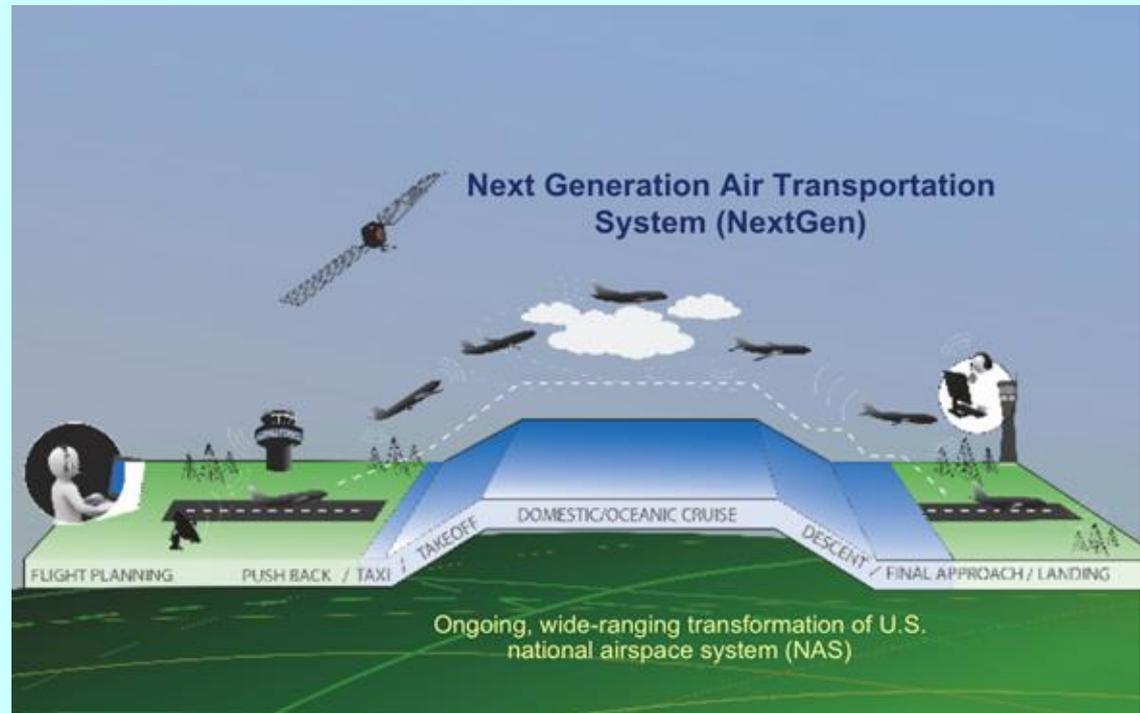


PSRC NextGen Study

Preparing Busy General Aviation Airports for NextGen Technologies

**Washington
Transportation
Commission**

June 18, 2014



Regional Airport System Planning Program

- Supported by FAA funding (90%)
- Planning partners: FAA, WSDOT Aviation Division, airport sponsors, user groups, industry
- Previous plans and studies:
 - Regional Airport System Plan – 1969, 1988, 2001
 - Strategic Plan for Aviation - 2002
 - Regional Airport Ground Access Plan - 2005
 - Air Cargo Strategy - 2006
 - Airport Compatible Land Use Program - 2011
 - NextGen Study – Phase 1 - 2012 (Airports)
 - NextGen Study – Phase 2 - 2014 (Airspace)

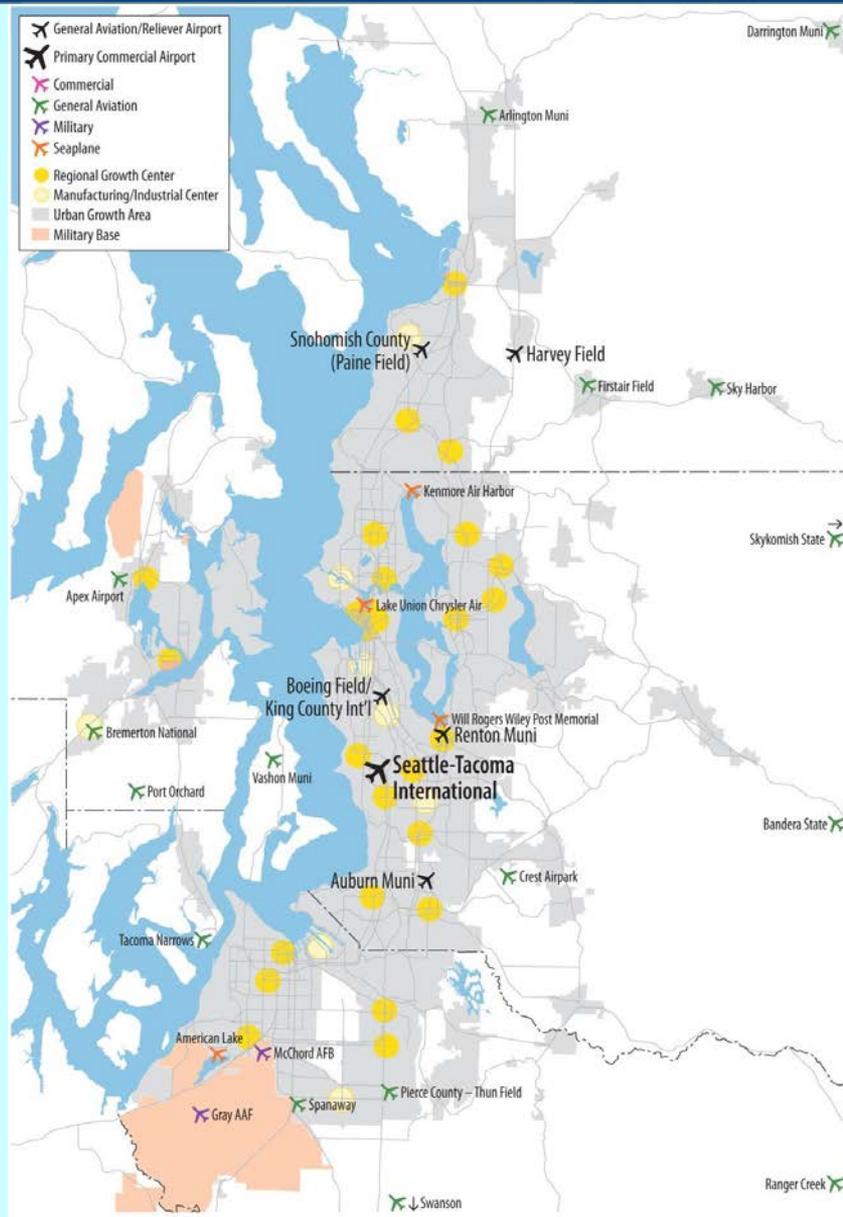
Regional Airport System

Airports by Category

Commercial	1
Reliever	5
General Aviation	16
Seaplane Base	4
Military	2

Activity

Passengers	33 million
Operations	1,800,000
Based Aircraft	3,500
Impact	\$35 billion



What Is NextGen?

Transformation of the National Airspace System (NAS)

“Most complex project ever undertaken by FAA”

Ground-based Air
Traffic Control (radar
& fixed waypoints)

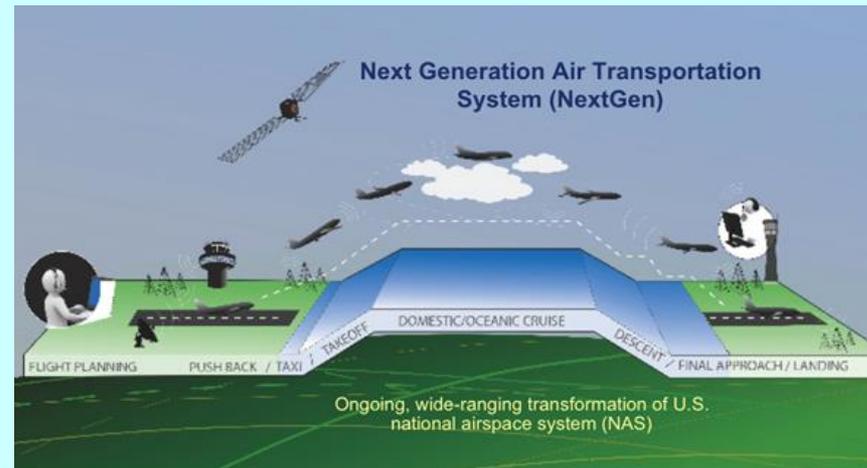
Evolution

Satellite-based Air
Traffic Management
(GPS)

Requirements: Satellites, equipment on aircraft, ground equipment, pilot training, new procedures, airport actions.

Technologies

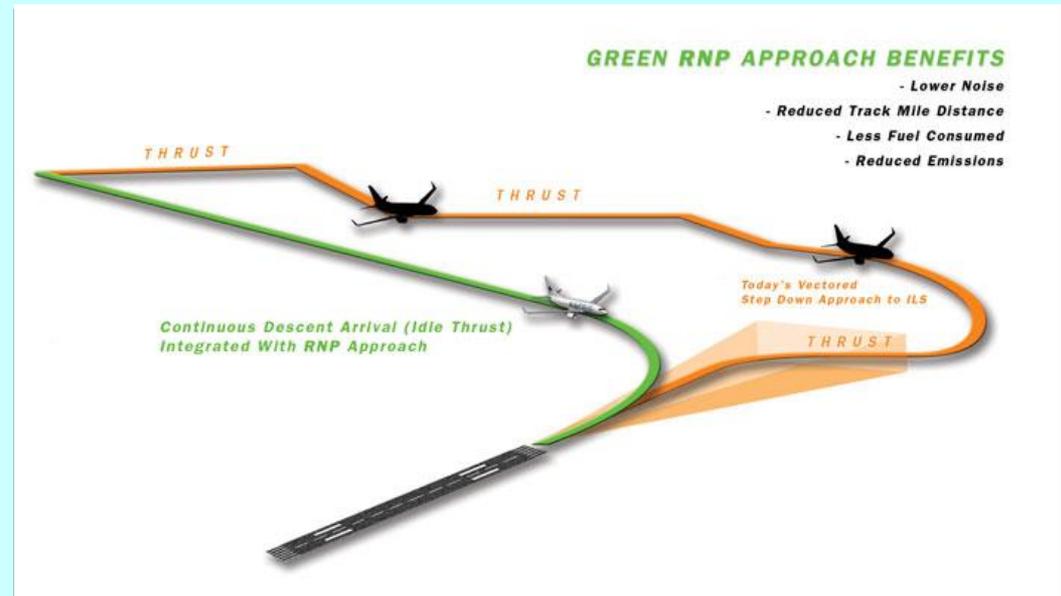
- Communication
- Surveillance
- Navigation



Benefits of NextGen

- More direct routing & reduced travel time
- Less delay (38% by 2020 – saves \$24 billion)
- More efficient use of capacity (airspace and airports)
- More flexibility For pilots (avoid terrain)
- Reduced emissions and noise
- Less fuel used
- Lower cost to users
- Enhanced safety

Sea-Tac Greener
Skies Program

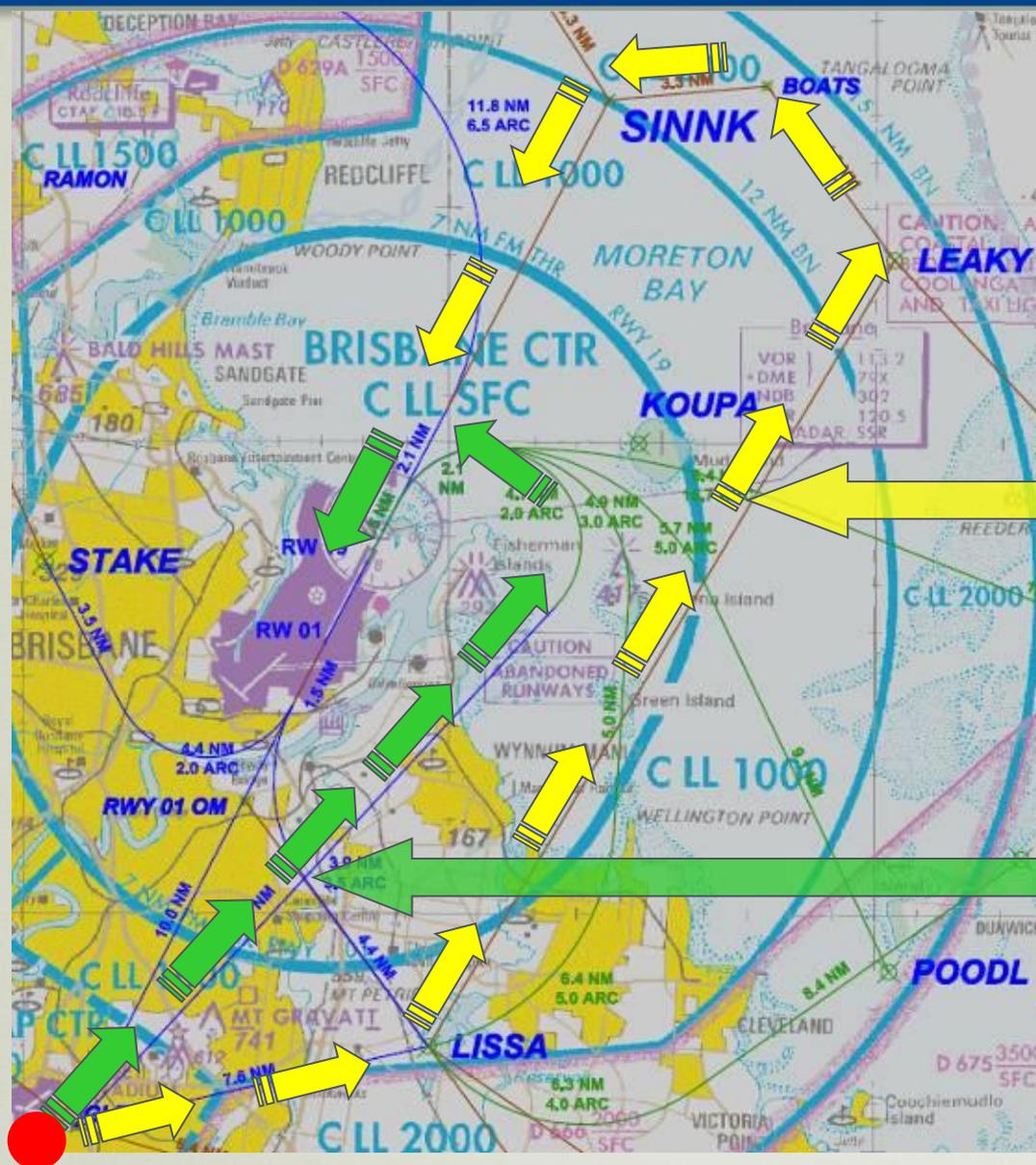


Brisbane RNP & ILS - Less is More

6

Benefits of RNP Arrival

- Less miles flown
- Less fuel burned
- Less time
- Less cost
- Less emissions



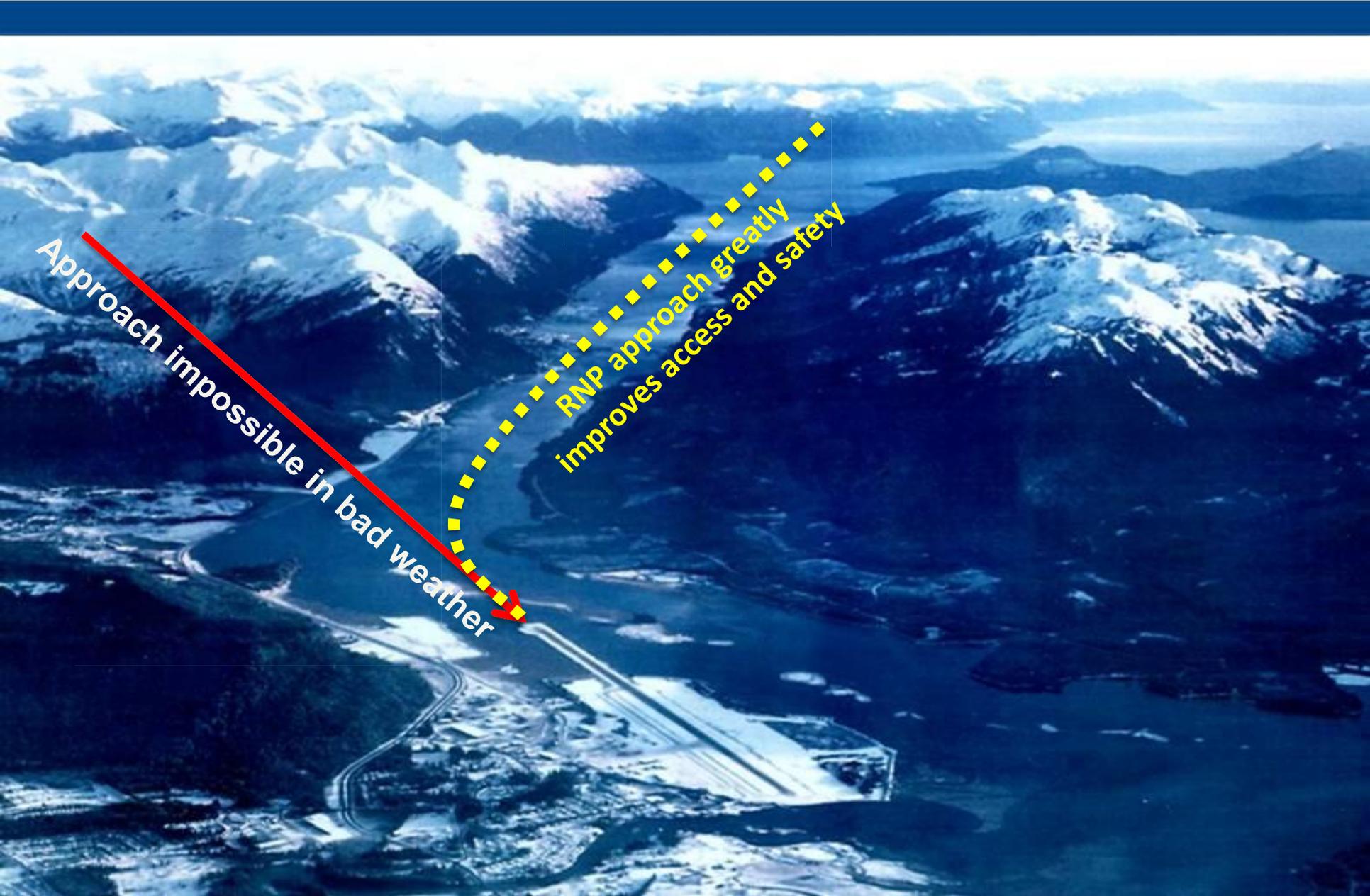
ILS
45.8nm

-22.6nm

RNP
23.2nm

RNP = Required Navigation Performance
 ILS = Instrument Landing System

Juneau RNP - Avoiding Difficult Terrain



Approach impossible in bad weather

RNP approach greatly improves access and safety

Scope of Work – Focused on Airports



Task 1: Identify “Busy” General Aviation Airports

- Airports where NextGen would be most beneficial



Task 2: Busy Airport Inventory (plus airport interviews)

- Collect and tabulate relevant airport information



Task 3: Gap Analysis

- Evaluate airports to identify “Gaps” between existing conditions and FAA NextGen requirements



Task 4: Implementation Plan

- Identify improvements and prepare cost estimates



Task 5: NextGen Analysis and System Applications

- Prepare implementation strategies for each airport

PSRC Region – Top 10 Busy Airports

King County International – Boeing Field

Snohomish County – Paine Field

Renton Municipal

Pierce County – Thun Field

Bremerton National

Auburn Municipal

Harvey Field

Arlington

Crest Airpark

Tacoma Narrows



BUSY AIRPORTS

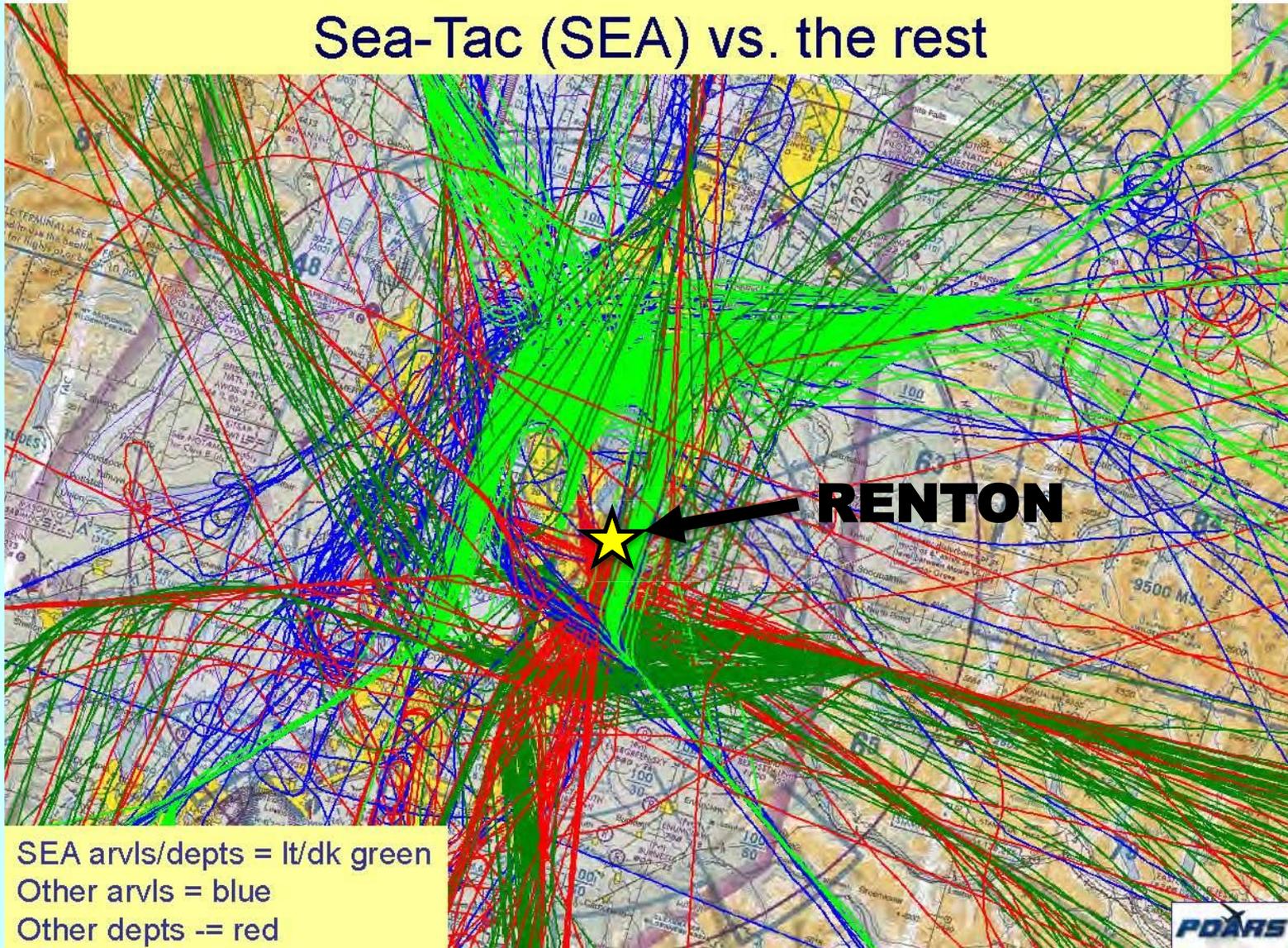
3,500 Based Aircraft

1,200,000 Annual Operations

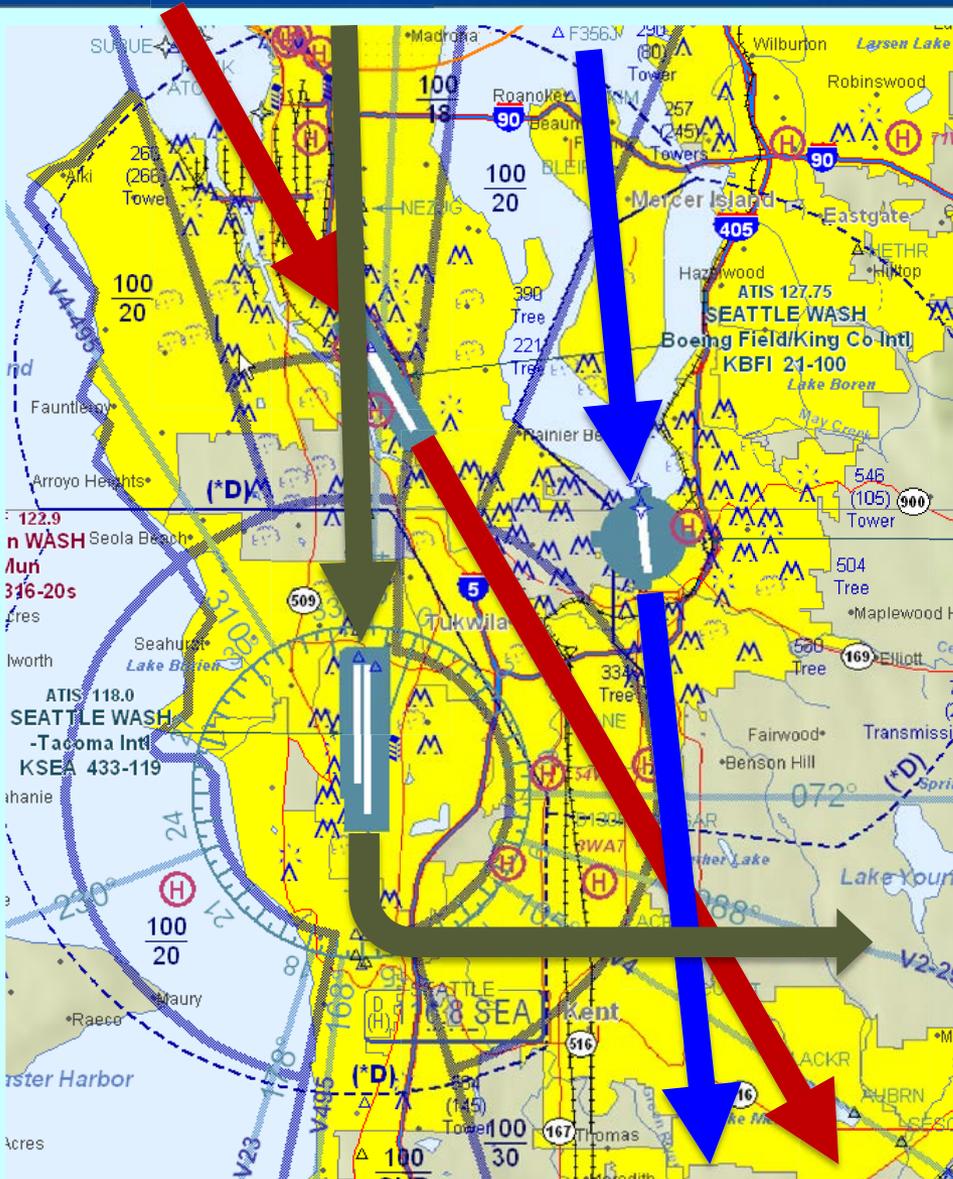


The Airspace is BUSY (radar flight tracks – one day)

Sea-Tac (SEA) vs. the rest



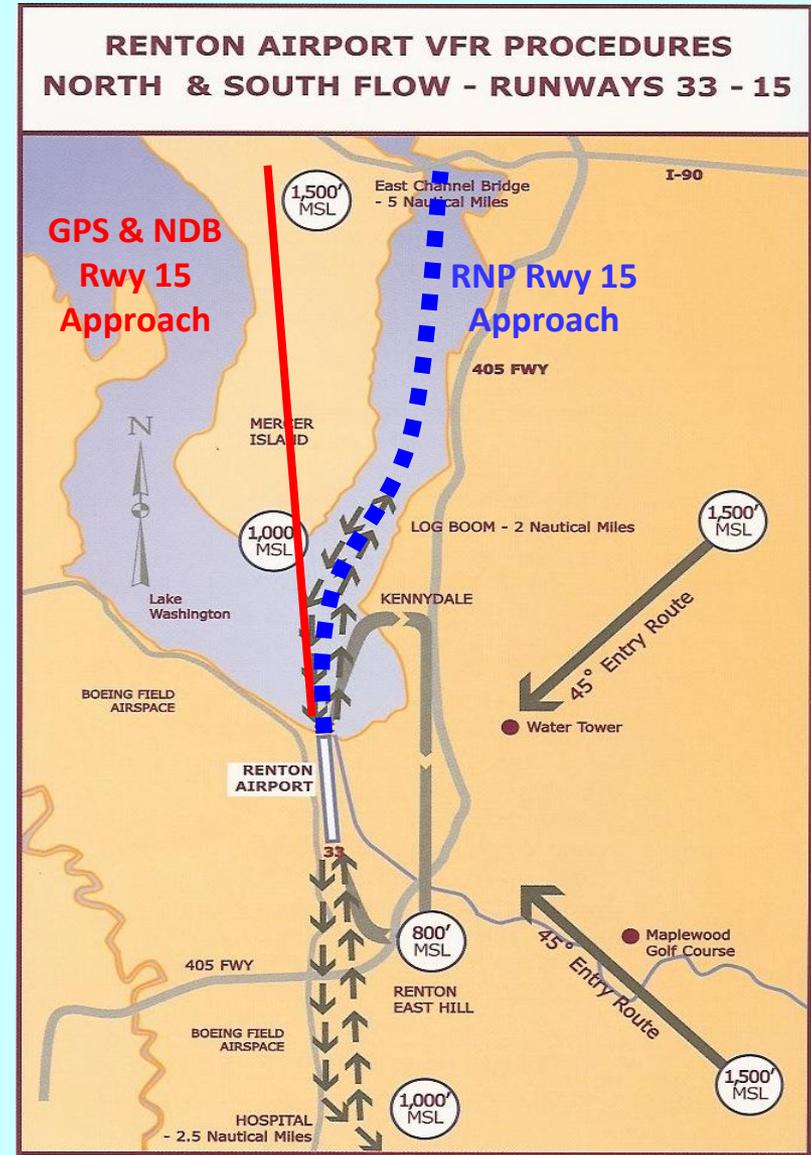
Renton Airspace and Community Issues



- Conflict with Boeing Field traffic, south
- Boeing Field and Sea-Tac arrivals cross
- Potential conflict with Sea-Tac departures, east
- North arrival directly over noise-sensitive Mercer Island

Potential NextGen Benefits at Renton

- Reduced airspace conflicts
- RNP approaches + departures over East Channel
- Reduced noise on Mercer Island
- Improved access in bad weather



Next Steps

- **Airport Master Plans:**

 - Underway: Auburn, Bremerton, Tacoma Narrows

 - Upcoming: Renton (2014), Harvey Field (2014), Thun Field (2015)

- **Airport Studies to Implement NextGen – Renton 2014**
- **Regional NextGen Airspace Study – start 2014**
- **Statewide Airport System Plan update – 2015**
- **Greener Skies Over Seattle – ongoing**
 - Joint effort by Alaska Airlines, FAA, Port of Seattle

Greener Skies Over Seattle



Information and Contacts

www.psrc.org/transportation/airtrans/nextgen/

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