Noise Programs & NextGen Briefing

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Presentation Overview

• Noise Information Hotline
• Increased Operations
• Economic Impacts
• Noise Contours
• Noise Mitigation Programs
• Fight Procedures
Noise Information Hotline

Noise Office Inquiries – Noise Hotline & online comment forms

• 2016: 2,959
  – 10 people = 55% of comments
• 2015: 2,632
  – 4 people = 59% of comments
• 2014: 2,172
  – 4 people = 63% of comments

Calls to the Noise Office have increased in the past couple of years
Aircraft Operations

• 2016: 412,170 operations – 8% increase
• 2015: 381,408 operations – 12% increase
• 2014: 340,478 operations – 7% increase
• 2013: 317,186 operations

The difference between 2013 and 2016 was 94,984 operations.
That’s 260 more aircraft going over homes per day.

The increase in operations is predominantly what is causing additional noise complaints.
Sea-Tac Airport Economic Impacts

- Economic Impact = $16.3 billion annually in business revenue
- Generates 171,769 jobs / 19,000 directly related to the airport
- Approximately 4,000 airport employees live in the local cities
- Each international flight route generates $75 million annually to the economy
- Tourism creates $365 million annually in state & local taxes and approximately 140,000 jobs.
Residential sound mitigation occurs within the Noise Remedy Boundary per FAA rules.
Sea-Tac contours are based off aircraft operations data

- All aircraft operations
- Airport characteristics: altitude/runways/taxiways
- Flows – North/South
- Type of aircraft in fleet
- Aircraft configurations: gear/flaps
- Engine testing statistics
- Weather
- Terrain
- Flight paths
- Performance data
- Flight distances with payloads

DNL is a cumulative metric required by the FAA – 65 DNL is the area the FAA allows for mitigation
Accomplishments to Date

– 9400 Single-family homes sound insulated
– 8 Schools sound insulated
– 14 College buildings sound insulated
– 246 Condo units sound insulated
– 359 Mobile home units acquired and residents relocated

$400 million spent since 1985 on mitigation
Part 150 Approved Sound Mitigation Programs

- Single-Family Residential Insulation – Continuation of 1985 program
- Condominium Insulation
- Apartment Insulation – Pilot Project
- Places of Worship Insulation – Pilot Project
- South Approach Transition Zone Voluntary Residential Acquisition
- School Insulation – MOA with FAA & School District

Part 150 is the FAA regulation outlining how airports study noise
Noise Abatement

• Flight Procedure Monitoring

Procedures are designed to minimize noise impacts
Jet Noise Abatement Procedures

Noise Abatement Procedures are for jet aircraft only
Flight Paths

Flight paths have been in place since 1990
What is NextGen?

- **Surveillance**
  - Automatic Dependent Surveillance Broadcast (ADSB)
    - Onboard aircraft equipment broadcasts location and speed
- **Data Communications**
  - A way pilots and controllers access digital information
- **Automation**
  - Systems and weather
- **Navigation**
  - Performance Based Navigation
    - Required Navigation Performance (RNP)
    - Optimized Profile Descent

NextGen is a suite of tools being implemented by the FAA to improve the airspace
NextGen RNP relies on GPS
Legacy navigation rely on ground based systems
Optimized Profile Descent

Traditional Step-down Approach

Optimized Profile Descent

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Optimized Profile Descents one element of the NextGen RNP Approach
Not all approaches are NextGen
Final Approach

When the aircraft are lined up with the runways for landing they descend at a 3 degree angle.

3 degree glideslope is standard in the U.S. – Altitudes have not been lowered
South Flow Before and After Greener Skies

Greener skies approaches are west side only

NextGen Narrowed Approach Path
North Flow Before and After Greener Skies

NextGen Narrowed Approach Path

Greener skies approaches are west side only
Questions?