



# The U.S. Airlines' Aircraft Noise Record and Management Initiatives

- U.S. Aviation's Strong Aircraft Noise Reduction Record
- Our Aircraft Noise Initiatives
- A Word about Our Synergistic Environmental Commitments

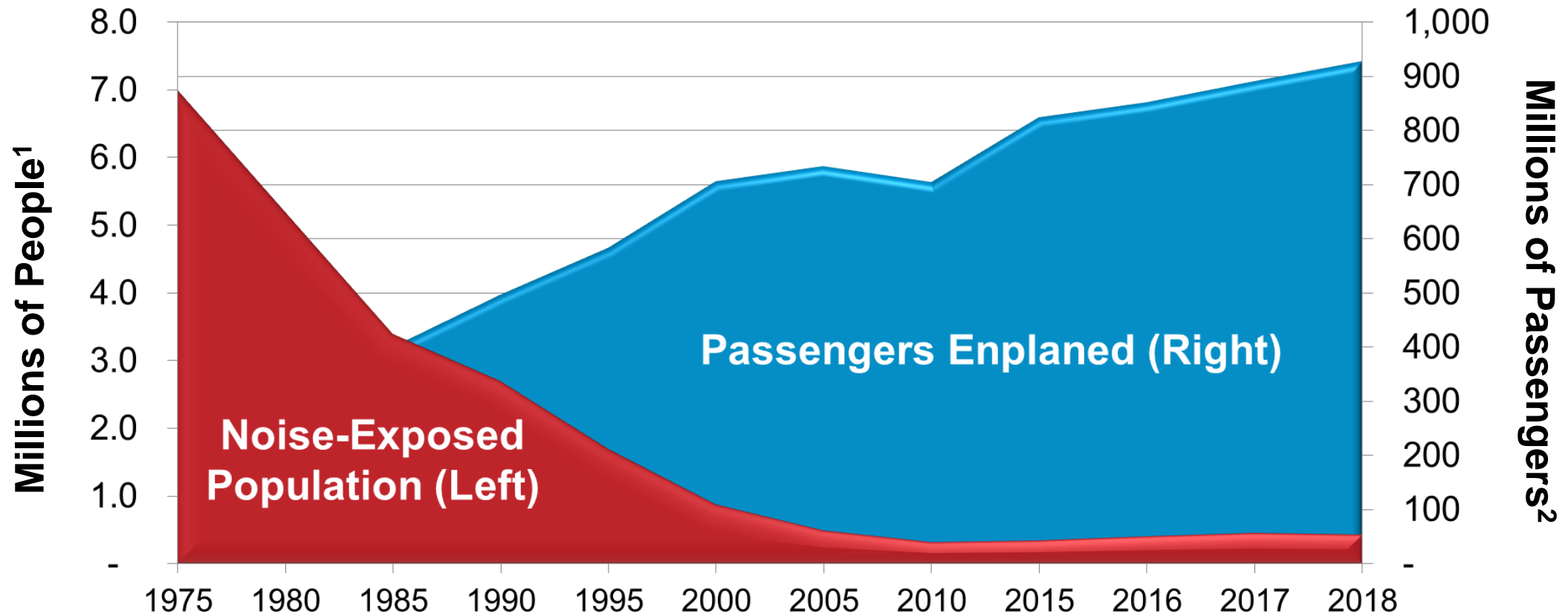
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# U.S. Aviation Has Gotten Markedly Quieter

From 1975-2018, the Number of U.S. Residents Exposed to Significant Aircraft Noise Fell 94% While Enplanements Rose 359%; 51% from 2000-2018 (Enplanements Rose 31%)



1. U.S. residents exposed to significant (65 dB DNL) noise levels from all aviation operations within U.S. airspace
2. Passengers enplaned on U.S. and foreign flag carriers as captured in the FAA Terminal Area Forecast (TAF)

# How Aviation Has Greatly Reduced Aircraft Noise

As with Emissions, through Investment, Technology, Operations & Infrastructure

- » **Aircraft Are 75% Quieter Today than the First Generation of Jet Aircraft**
  - And today's new aircraft are 50% quieter than aircraft 10 years ago
- » **Stringent Aircraft Noise Standards and Noise Policy Requirements**
  - Provisions cover aircraft standards; sound insulation; noise mitigation; aircraft restrictions; environmental impact analysis; community engagement; etc.
- » **Research & Development Programs**
- » **Airlines Use Operating Procedures to Reduce Noise – NextGen Can Help Enable This**

# NextGen Is Critically Important to the U.S.

But There Can Be Changes in Noise Exposure

## » NextGen Is Necessary & Highly Beneficial

- Necessary to **maintain and enhance safety**
- Critical to **U.S. competitiveness**
- **Reduces delays**
- Enables further **fuel and emissions reductions** (climate and local impacts)
- Can and often does **decrease net noise exposures**

## » But New Procedures Can Raise Noise Concerns

- New ATC procedures can **shift who is exposed** – even if fewer people overall are exposed; and some PBN procedures **can “focus” noise** over certain areas
- But note, FAA data shows that **the vast majority** of procedure changes has been **non-controversial**

## » The Aviation Industry Has Been Working to Address Potential Noise Impacts

# How Aviation Is Addressing Heightened Noise Concerns

## » **With Improved Finances, U.S. Airlines Are Purchasing More Newer & Quieter Aircraft**

- As noted, 800 new aircraft from 2017-18, with more than 1,700 additional planes expected in the coming years

## » **New U.S./ICAO “Stage 5” Noise Standard Went into Effect for New Large Aircraft Year-End 2017**

- 7 decibels reduction from Stage 4; approximately 35% quieter
- NOTE: Goes into effect for small aircraft (e.g., business jets) in 2020

# How Aviation Is Addressing Heightened Noise Concerns (cont.)

- » **Public-Private CLEEN R&D Program with FAA for Additional Noise Reduction at Source**
  - Goal is aircraft achieving a 32-decibel reduction relative to the current standard
- » **Implementing Optimized Profile Descents & Other Noise-Reducing Operating Procedures Where Safe and Practicable**
  - ATC procedures are highly technical and safety is paramount; and “local” procedures must work within National Air Space
- » **Supporting Community Outreach/Engagement**

# Aviation Support for Enhanced Community Outreach

## Airlines, Airports, Community & FAA Engagement

### » 2014 and 2016 NextGen Advisory Committee (NAC)/Industry PBN Blueprint Recommendations

- Comprehensive recommendations for enhanced outreach

### » FAA Is Implementing, with Airports and Aircraft Operators Supporting

- FAA's updated Community Involvement Manual details need for and approaches to effective outreach
- Enhanced Metroplex outreach strategy and supporting tools, scalable to single sites
- Recent examples include Denver; South-Central Florida; review of Phoenix procedures; Las Vegas; Burbank; initial Northeast Corridor outreach



# A Word About the U.S. Airlines' Synergistic Environmental Commitments

## » Strong Environmental Record . . .

- 94% reduction in significant noise exposures 1975 to 2018, while enplanements rose 359%
- 2% of man-made CO<sub>2</sub>, while 5% of the GDP; and we have an aggressive climate commitment going forward
- Carbon monoxide and smoke virtually eliminated, and oxides of nitrogen from aircraft continually reduced
- Completed voluntary program for aircraft deicing (on top of regs)
- Extensive recycling and other sustainability initiatives

## » And We Are Focused on Continuing and Improving on that Record . . .





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