# Aeronautics and Space Engineering Board Aircraft Noise Reduction

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### Outline

- Industry Efforts
  - Airport Initiatives
    - Community and Committee Involvement
    - > Fly Quiet Program
  - Flight Operations
  - Fleet Technology

## Airport Initiatives

- Fort Lauderdale FLL
  - Part 150 Study Technical Committee
- San Diego International Airport SAN
  - Airport Noise Abatement Committee
  - Quarterly Noise Reports
  - Flight Procedure Evaluation (Figure 1)
- Santa Ana SNA
  - Noise Roundtable
  - Monthly Noise Reports
  - A220-100 E Class Qualification
- Fly Quiet Programs



SOURCE: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmylndia, NGCC, OpenStreetMap Contributors, and the GIS User Community, August 2018 (basemap); San Diego County Regional Airport Authority ANOMS data, 2018 (FAA noise dots); ESRI Data, 2010 (Airports); National Flight Data Center (NFDC), October 2018 (waypoint); Ricondo & Associates, Inc., October 2018 (alternatives).

Figure 1: SAN ANAC Recommendation to relocate Noise Dot #4 and #5

## Flight Operations

- Noise Abatement Departure Procedures
- RNAV
  - Continuous Descent
- Fort Myers RSW
  - Increase use of visual
    - Provide comfort and familiarity with ground track for Local Controllers
  - Next Phase: Full RNAV (GPS) approach
- Continuous Pilot Education

KRSW/RSW

19 APR 19



FT MYERS, FLA SOUTHWEST FLORIDA INTL

#### **EFSR**

#### **GATE INFORMATION**

#### Communications

Station Operations: 131.85 Delta Operations

Gates: C2, C4, C6-C9

#### SPECIAL NOTES

#### CAUTION

Light poles on east edge of east ramp 90' from centerline.

#### Airport Operations Without An Operating Control Tower

- Tower Hours: 0600-2400 LT
- Refer to AM, Ops Specs, No Operating Control Tower.
- ASOS Available via VHF and/or ASOS (239) 561-0966.
- Closeout/Activate Flight Plan with ATC or FSS: 1-888-766-8267.

#### DEPARTURES

Pushback Clearance: Required for Gates C8 and C9 only.

#### **ARRIVALS**

#### CAUTION

Airports with similar runway alignment. Do not inadvertently mistake Page Field (KFMY) located 7 NM northwest of KRSW.

#### Noise Abatement Procedures Rwy 6

- When weather is better than 4000'/5 SM consider requesting the RNAV Visual.
  - Maintain 3000' until crossing the shoreline if on a visual approach southwest of the airport.

Figure 2: Noise Abatement Procedure Revision

## Fleet Technology

- New Features Considered
  - Fuel Savings
  - Maintenance Expense/Reliability
  - Noise Level
- Incoming Fleets
  - A220
    - Stage 4 (Upgraded to Stage 5 in 2020)
    - PW1521GA
  - A330-900
    - Stage 5
    - Trent 7000-72
  - A350
    - Stage 5
    - Trent XWB-84



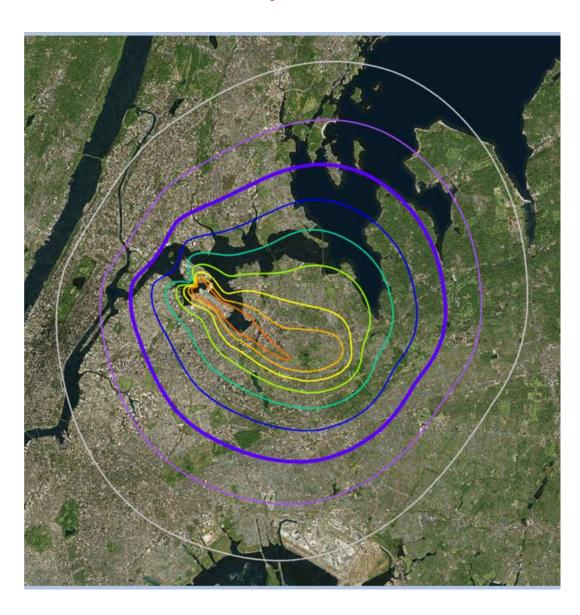
Figure 3: A220-100



Figure 4: A330-900

## MD-88 LGA-ATL RWY 13 Departure

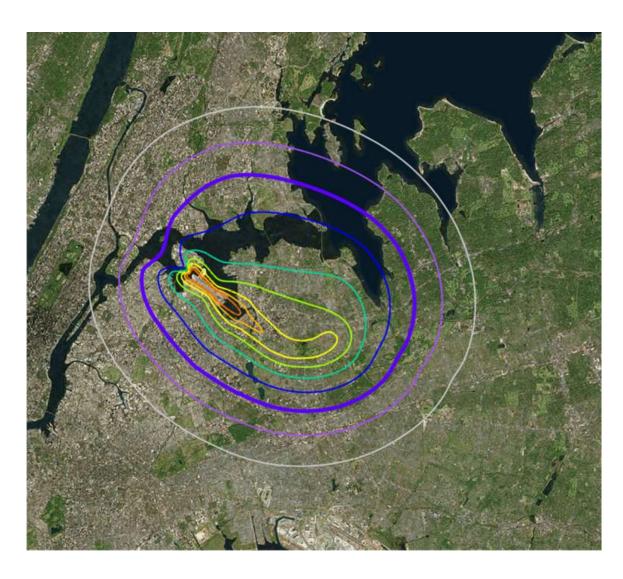
- MD-88
  - 149 seats
  - EIS: 13Feb87
  - SEL
  - 55 dB
  - 60 dB
  - 65 dB
  - 70 dB
  - 75 dB
  - 80 dB
  - 85 dB
  - 90 dB
  - 95 dB



- Sound Exposure Level Comparison
- Single flight departure from RWY 13
- Turn at end of runway to follow SID for West or Southwest tracks

## A320 LGA-DEN RWY 13 Departure

- A320
  - 160 seats
  - EIS: 1Aug90
  - SEL
    - 55 dB
    - 60 dB
    - 65 dB
    - 70 dB
    - 75 dB
    - 80 dB
  - 85 dB
  - 90 dB
  - 95 dB



- Sound Exposure Level Comparison
- Single flight departure from RWY 13
- Turn at end of runway to follow SID for West or Southwest tracks

## A220 LGA-DEN RWY 13 Departure

- A220-100
  - 109 seats
  - EIS: 200ct18
  - SEL
  - 75 dB
  - 80 dB
  - 85 dB
  - 90 dB



- Sound Exposure Level Comparison
- Single flight departure from RWY 13
- Turn at end of runway to follow SID for West or Southwest tracks

# Population Impact

LGA Comparison

Contour (dB)	MD88	A320	ERJ-175	717	757	A220
65	4,042,934	2,345,385	1,745,121	1,631,556	1,155,393	1,113,044
75	1,649,970	692,820	500,040	352,080	269,237	109,610
85	358,560	73,980	47,250	5,670	4,897	4,396
95	1,035	0	0	0	0	0

# Thank You!

