

CLT Airport Community Roundtable

Noise Cause/Impact/Solution Matrix – as of 12/14/18

A) NOISE CATEGORIES	B) SPECIFIC CAUSES	C) IMPACT LEVEL	D) EXISTING INITIATIVES	E) ACR-RELATED SOLUTIONS AND STATUS	F) BENCHMARKING OPPORTUNITIES
WHAT/ EQUIPMENT	Loud Aircraft			Modify 283 American Airlines Airbus aircraft with the vortex generators (To be completed by 3/1/22)	Phase out of loudest aircraft and introduction of quietest equipment. Fitting all A320s with quiet technology (vortex generators)
	Inadequate residential insulation/ abatement		The City of Charlotte has created a noise disclosure overlay based on the 1996 65 DNL contours. – CLT Ref. 3 CLT has soundproofed over 1000 homes, six churches and three schools in accordance with our Part 150 program. – CLT Ref. 4 Over 400 properties have been purchased for noise abatement reasons. – CLT Ref. 5		
	Inadequate noise monitoring network and metrics beyond Dba thresholds		CLT is phasing out physical noise monitors in preference to 'virtual monitors', utilizing a similar system to the FAA Aviation Environmental Design Tool (AEDT), the official contour generating system. – CLT Ref. 12		Increase noise monitoring locations and reporting Include noise sensitive locations like schools in noise monitoring Increase noise metrics beyond 65 Dba thresholds (measure frequency and duration)

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WHEN/ TIMING	Commercial night flights and equipment movement between 11pm and 6am		CLT Part 150 details preferred runway use: 5/23 during night hours, no departures on 36L/18R, etc. – CLT Ref. 3 Run-up restrictions during night hours. – CLT Ref. 9	Make Voluntary Curfew Request (Request in Development) – Motion 07-18	Night flight restrictions – noise quotas, seasonal limits, landing fees
	Freight night flights, e.g. FedEx, UPS, Amazon				Night flight restrictions – noise quotas, seasonal limits, landing fees
HOW/ ARRIVALS	Next Gen Flight Rail concentration			Move Downwind Arrival Path - Alternating Rails (Being Analyzed) – Requests 43 and 48	
	Location of Arrival Rails over highly populated Areas			Return the CAATT Waypoint to Pre-Metroplex location (Request sent to FAA) – Motion 06-18	
	Low altitude Way Point turns over residential areas				
	Non-optimal descent slope (CDA); low altitude over residential areas			Implement RNP CDA using Terminal Spacing and Sequencing – TSAS (test in Denver 2019) – Motion 01-17 ; Increasing use of OPD – Request 44	Continuous descent approach (CDA) or steeper approaches
	Early deployment of landing gear				Minimize landing gear noise; deploy at latest moment

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HOW/ DEPARTURES	Next Gen Flight Rail concentration			Modify South Departure Procedure: turns, headings, altitudes (Being Analyzed) – Motion 05-18; Requests 40-42	
	Low altitude Way Points turns over highly populated Areas			Altitude-based Turns on South Departures; this analysis also addresses Multiple RNAV paths, different headings, etc. (Being Analyzed)	Implement DOT rules on departure distance/height ratios (NPR) to 4,000'
	Non-optimal ascent slope; low altitude over residential areas			Assess Existing Departure Profiles (Being Analyzed)	
	Non-NPR compliance				Tracking of NRP performance compliance (also noted under “People/Orgs”)
	Departure High Speed/Noise			Slow the departure speed (process in experimental phase) – Motion 03-18	
	Unnecessary engine run ups		Run-up restrictions during night hours. (noted in Night Hours Section). – CLT Ref. 9		

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WHO/ PEOPLE, ORGS.	Low citizen awareness of CLT noise mgmt. efforts			CLT Noise Website; ACR involvement	
	Limited CLT/City initiative to proactively reduce noise and communicate to citizens.		CLT ACR established June 2017. – CLT Ref. 13	CLT Noise Website	Airports proactively and publicly describe all noise management practices Airports self- initiate robust noise management procedures
	No negative consequences for non-compliance with noise procedures				Tracking of NRP performance compliance and penalties for non-compliance
	Resistance from FAA and ATC Union to change procedures to reduce noise				
	Carrier and pilot procedures not focused on noise				
WHERE/ ENVIRON- MENT	Charlotte population growth of 3%				
	Orientation of three 18/36 NS runways				
	Decommissioning of 5/23 runway and additional 4 th NS Runway				