

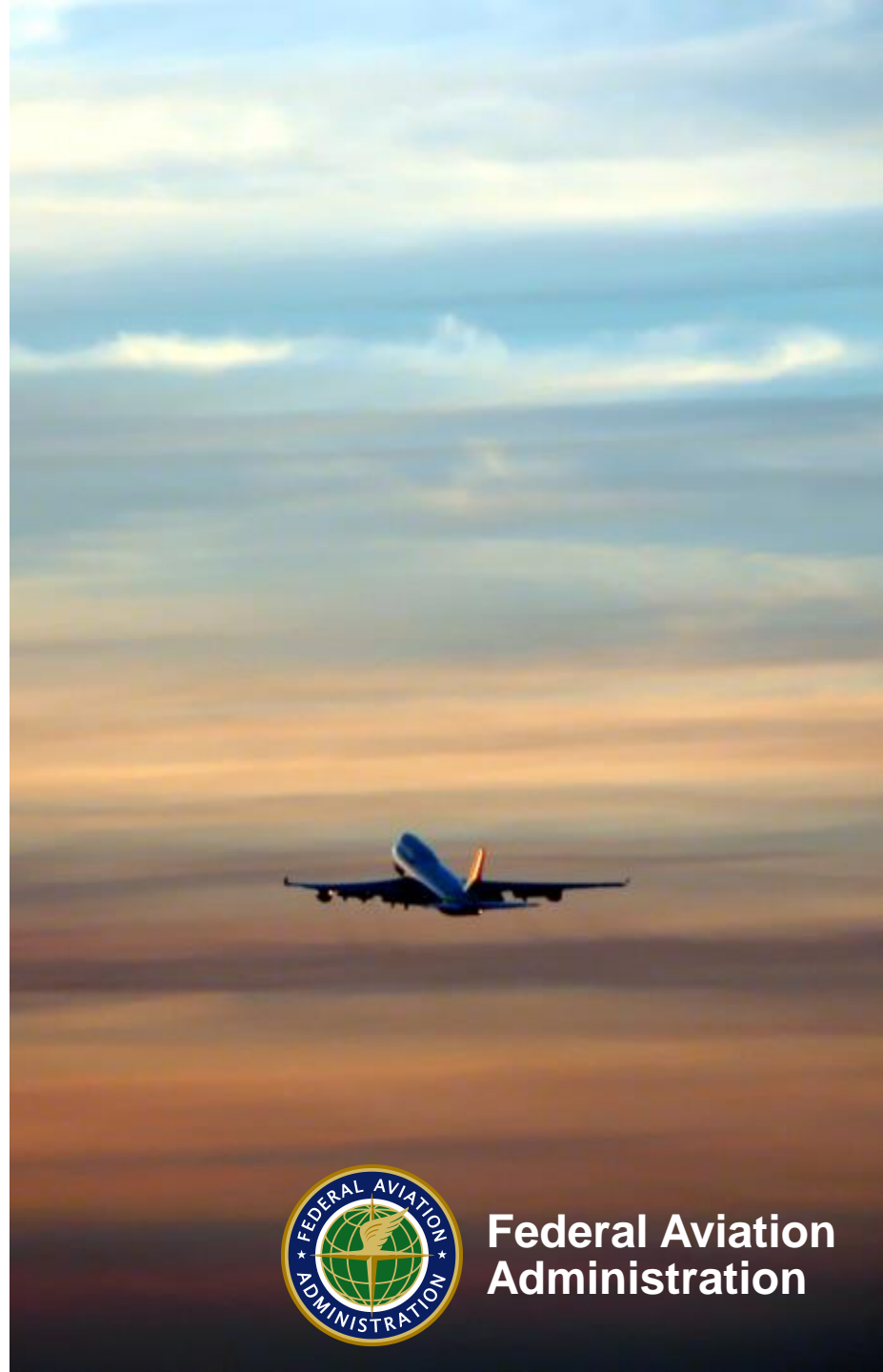
DCA LAZIR

Noise Analysis of Three Alternatives

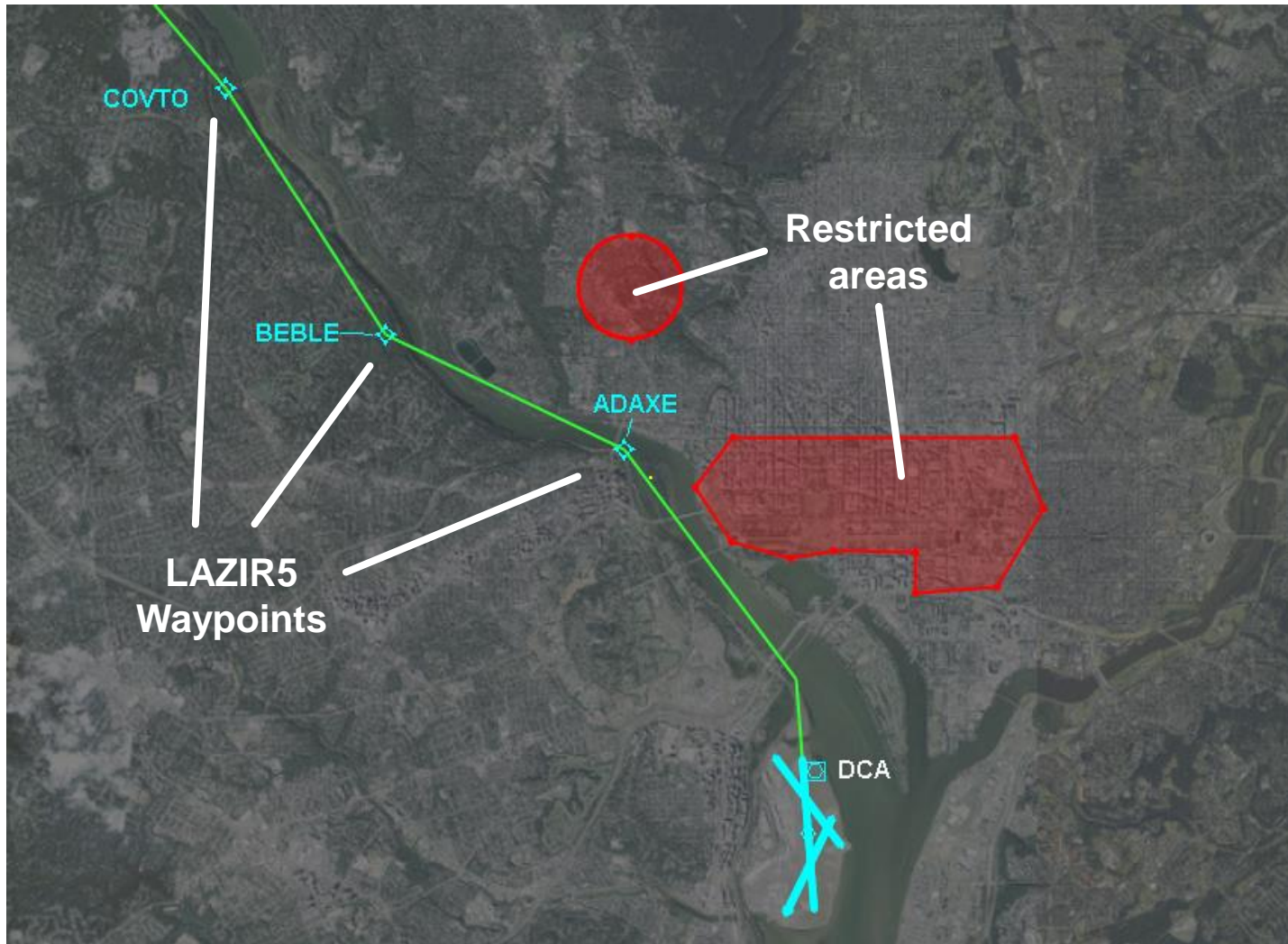
Presented to: DCA Roundtable
By: Federal Aviation Administration
Date: December 10, 2015



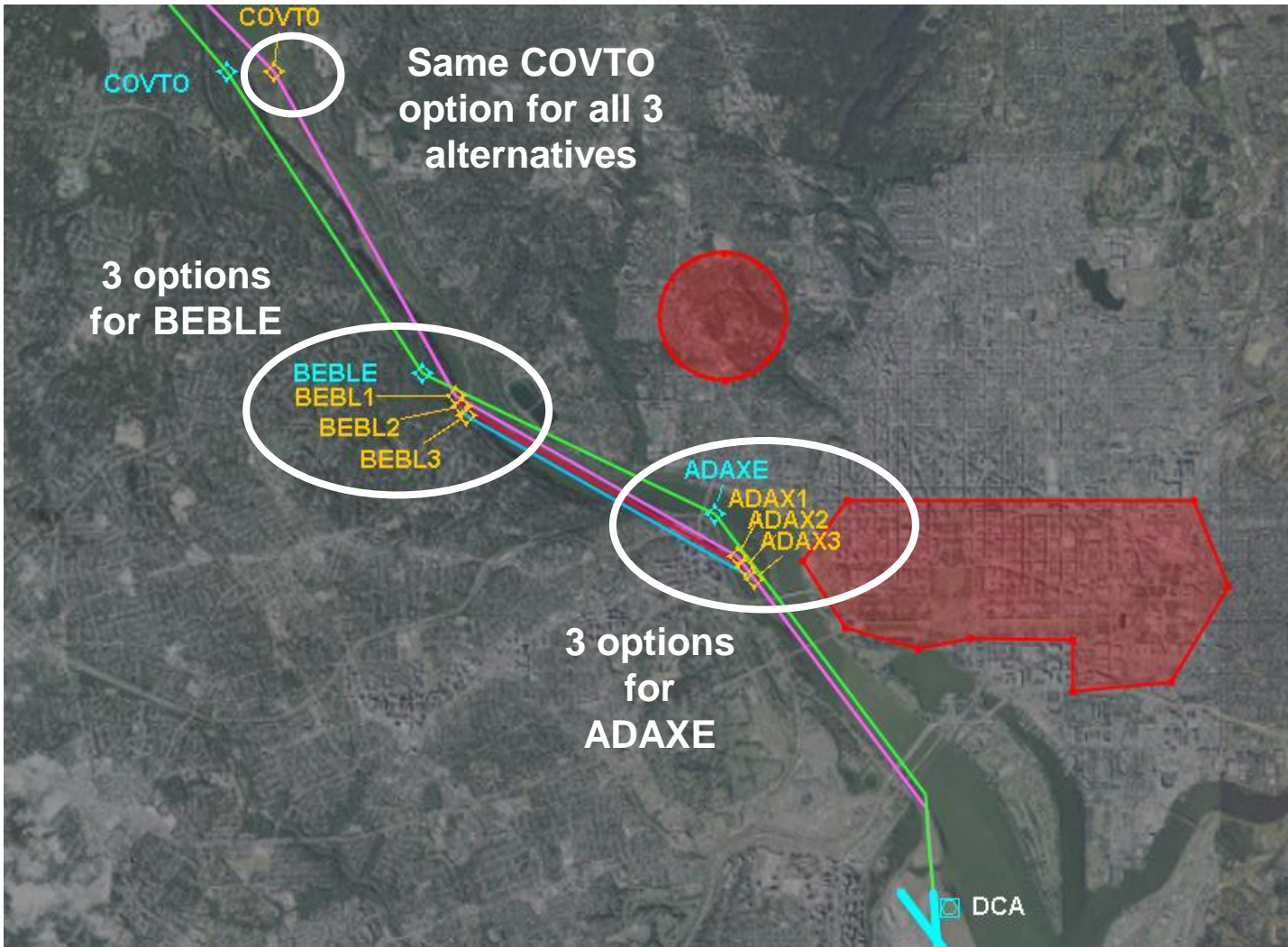
**Federal Aviation
Administration**



Current Runway 01 Departure: LAZIR5



Three Proposed Alternatives to LAZIR5



FAA Definition of “Significant” and “Reportable” Noise Changes for NEPA Compliance*

In a geographic area experiencing this noise level:	If an FAA action would change noise by at least this amount:	Then that noise change is called:
65 dB and higher	1.5 dB increase	Significant
Between 60 and 65 dB	3 dB increase or decrease	Reportable
Between 45 and 60 dB	5 dB increase or decrease	Reportable

For NEPA compliance, FAA analyzes noise using the “Day-Night Average Sound Level” (DNL) metric.

*As specified by FAA Order 1050.1F (“Environmental Impacts: Policies and Procedures”)



Results of LAZIR Analysis Using Significant and Reportable NEPA Criteria

FAA analysis shows that none of the alternative designs cause reportable or significant changes in noise when compared to LAZIR 5, based on NEPA criteria.

Alternative Design	Significant Noise Increases	Reportable Noise Changes
LAZIR A	None	None
LAZIR B	None	None
LAZIR C	None	None



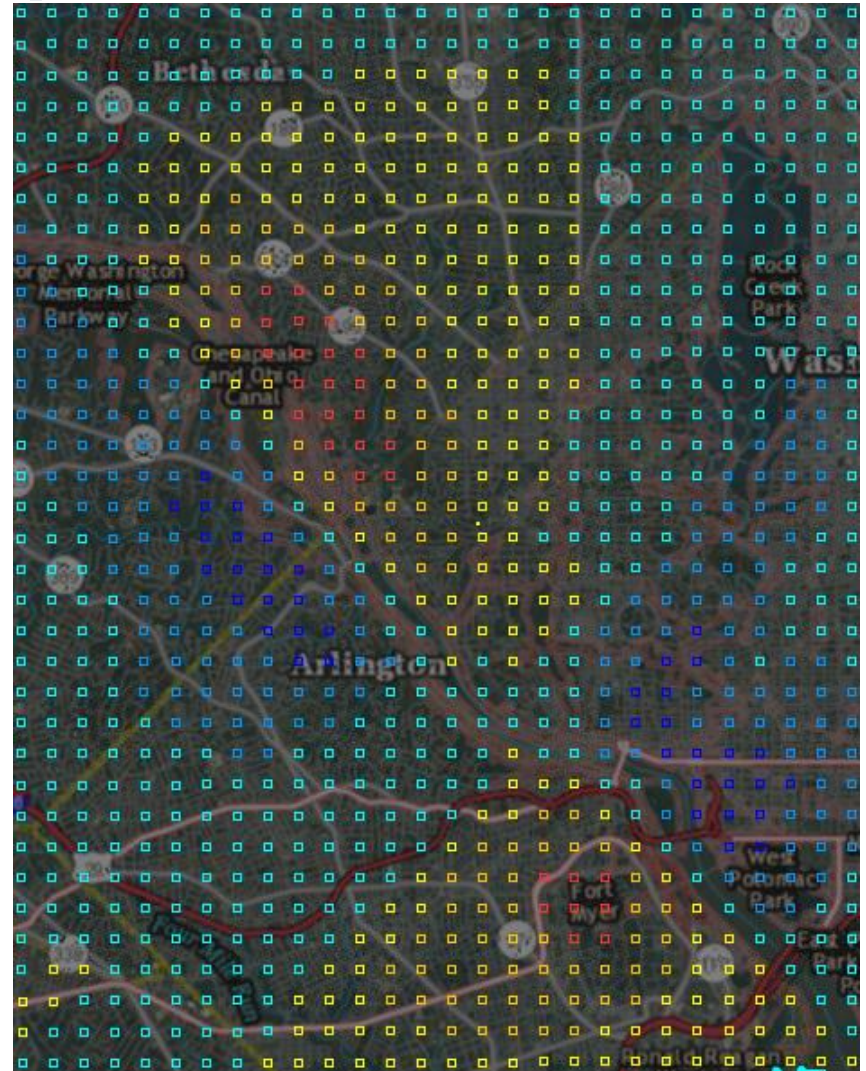
Results - LAZIR A Compared To LAZIR 5

Compared to LAZIR 5:

- LAZIR A **increases** noise by a maximum of 0.93 dB
- LAZIR A **decreases** noise by a maximum of 0.88 dB

Less than -1.0 dB	<input type="button" value="Set Color"/>	Noise Decrease vs. LAZIR 5
Between -1.0 and -0.66 dB	<input type="button" value="Set Color"/>	
Between -0.66 and -0.33 dB	<input type="button" value="Set Color"/>	
Between -0.33 and 0 dB	<input type="button" value="Set Color"/>	
Between 0 and +0.33 dB	<input type="button" value="Set Color"/>	Noise Increase vs. LAZIR 5
Between +0.33 and +0.66 dB	<input type="button" value="Set Color"/>	
Between +0.66 and +1.0 dB	<input type="button" value="Set Color"/>	
Greater than +1.0 dB	<input type="button" value="Set Color"/>	

Legend for Noise Impact



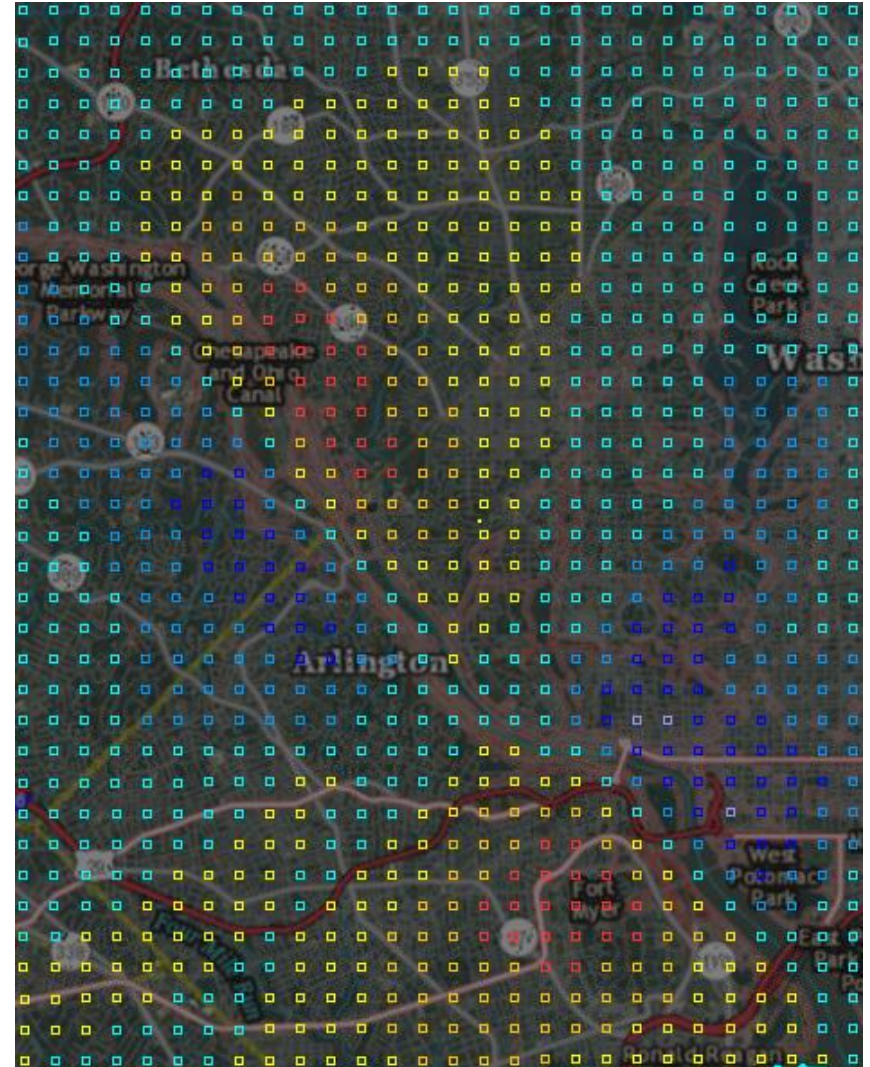
Results - LAZIR B Compared To LAZIR 5

Compared to LAZIR 5:

- LAZIR B **increases** noise by a maximum of 0.94 dB
- LAZIR B **decreases** noise by a maximum of 1.04 dB

Less than -1.0 dB	<input type="button" value="Set Color"/>	Noise Decrease vs. LAZIR 5
Between -1.0 and -0.66 dB	<input type="button" value="Set Color"/>	
Between -0.66 and -0.33 dB	<input type="button" value="Set Color"/>	
Between -0.33 and 0 dB	<input type="button" value="Set Color"/>	
Between 0 and +0.33 dB	<input type="button" value="Set Color"/>	Noise Increase vs. LAZIR 5
Between +0.33 and +0.66 dB	<input type="button" value="Set Color"/>	
Between +0.66 and +1.0 dB	<input type="button" value="Set Color"/>	
Greater than +1.0 dB	<input type="button" value="Set Color"/>	

Legend for Noise Impact



Results - LAZIR C Compared To LAZIR 5

Compared to LAZIR 5:

- LAZIR C **increases** noise by a maximum of 1.08 dB
- LAZIR C **decreases** noise by a maximum of 1.31 dB

Less than -1.0 dB	<input type="button" value="Set Color"/>	Noise Decrease vs. LAZIR 5
Between -1.0 and -0.66 dB	<input type="button" value="Set Color"/>	
Between -0.66 and -0.33 dB	<input type="button" value="Set Color"/>	
Between -0.33 and 0 dB	<input type="button" value="Set Color"/>	
Between 0 and +0.33 dB	<input type="button" value="Set Color"/>	Noise Increase vs. LAZIR 5
Between +0.33 and +0.66 dB	<input type="button" value="Set Color"/>	
Between +0.66 and +1.0 dB	<input type="button" value="Set Color"/>	
Greater than +1.0 dB	<input type="button" value="Set Color"/>	

Legend for Noise Impact

