

# **Centennial Airport Noise Contour Map Update**

## **Noise Contour and Population Analysis**

**October 2007**

**Barnard Dunkelberg & Company, Inc. and  
BridgeNet International, Inc.**

## Existing Baseline Noise Modeling Inputs

### Existing Aircraft Operations

The existing noise environment for Centennial Airport was evaluated based upon the level of aircraft operations in 2005/2006, and the associated airport operational characteristics. A DNL noise contour update requires that the baseline or existing noise exposure contour maps reflect annual conditions using a recent continuous 12-month period, from June 2005 – June 2006. The development of the baseline conditions used data from a variety of sources. The sources of data for this study are listed below:

- Aircraft tower counts
- Aircraft situational display information (ASDi) Data (for IFR aircraft)
- Field observations
- Discussions with airport, FAA ATAC, and FBO staff
- Evening and nighttime operations counts

As noted earlier, aircraft noise exposure maps are generated using the FAA's Integrated Noise Model (INM). The INM computer model requires a variety of operational data to evaluate the noise environment around an airport. These data include the following information, which are discussed in detail in the following paragraphs:

- Total aircraft activity levels
- Aircraft fleet mix categories
- Detailed fleet mix
- Time of day
- Runway use
- Departure and arrival procedures
- Flight paths
- Flight path utilization

### Total Aircraft Activity Levels

The total aircraft operational levels were derived directly from the FAA's Airport Traffic Control (ATC) tower activity data, called tower counts. The tower count data and nighttime activity logs showed that, for 2005/2006, there were a total of 321,945 operations, or an average of 882 operations per day (an operation is one takeoff or one landing).

## Aircraft Fleet Mix Categories

The breakdown of aircraft operator categories identified in ATC tower counts is useful for air traffic purposes, but does not provide sufficient detail necessary for the noise analysis. As a result, the breakdowns by aircraft fleet mix categories of aircraft operations are presented within this section with further refinements of these categories in the subsequent section, Detailed Aircraft Fleet Mix. Aircraft fleet mix categories are defined relative to type of aircraft (e.g., jet or propeller), as well as size and noise characteristic. These categories were determined from the different sources. Table D4 presents operations for the different categories of aircraft.

It is not possible to definitively categorize all of the operations into unique groups. For example, some air taxi operations are small single engine piston aircraft that may be categorized as general aviation piston, or vice versa. But these generally define the categories of operations that occur at the Airport and will be used for this DNL contour update.

Table D4  
**OPERATIONS BY AIRCRAFT CATEGORY – 2005/2006 BASELINE PERIOD**  
*Centennial Airport DNL Contour Update*

Operations Category	Daily Operations	Annual Operations	Percent Operations
Single Engine Local	297	108,346	33.7%
Single Engine Itinerant	191	69,811	21.7%
Multi Engine Local	43	15,839	4.9%
Multi Engine Itinerant	69	25,259	7.8%
Turboprop	128	46,724	14.5%
Business Jet	139	50,468	15.7%
Helicopter	6	2,263	0.7%
Military	9	3,235	1.0%
<b>TOTAL</b>	<b>882</b>	<b>321,945</b>	<b>100%</b>

Source: BridgeNet International

## Detailed Aircraft Fleet Mix

The specific mix of aircraft that operate at the Airport is one of the most important noise exposure factors related to the Airport. The fleet mix assumptions are presented in Table D5. This table presents the average daily operations for each type of aircraft used in the INM noise model, as well as a description of these aircraft.

The aircraft fleet mix data reported in the previous section does not identify the specific engine type used on the aircraft, which is required for noise modeling with the INM. Therefore, it was necessary to assign an INM aircraft type. For instance, an aircraft could be equipped with one of three different engines; each has a different noise profile. The INM aircraft type assigned for each of the aircraft operating at Centennial Airport was based upon the INM type that most closely matched the type of aircraft (and aircraft/engine combination) that operates at the Airport. Some aircraft with smaller numbers of operations were grouped into the aircraft type that was most representative of the characteristics of that aircraft.

Note that the same INM types are shown more than once in the table; this is to identify the separate categories of operations (e.g., air taxi vs. general aviation).



Table D5

**AIRCRAFT FLEET MIX ASSUMPTIONS FOR EXISTING CONDITIONS**

*Centennial Airport DNL Noise Contour Update*

Operations Category	INM Type	Daily Arrivals		Daily Departures		APO Terminal Area Forecast	Total Operations
		Day	Night	Day	Night		
Local GA Single Engine	GASEPF	98.94		98.94			72,229
	GASEPV	49.47		49.47			36,116
Local GA Multi Engine	BEC58P	20.12	1.57	20.93	0.77		15,839
Local GA Turbo	BEC9F	8.10	1.02	8.42	0.70		6,655
Local GA Helicopters	B206	3.10		3.10			2,263
<b>Local General Aviation (Total)</b>						<b>133,103</b>	<b>133,103</b>
Local Military	C130	0.23		0.23			165
	DHC6	1.77		1.77			1,292
<b>Local Military (Total)</b>						<b>1,457</b>	<b>1,457</b>
Itinerant GA Single Engine	CNA172	20.33	1.99	22.32			16,297
	GASEPF	50.90	0.38	49.36	1.92		37,432
	GASEPV	21.55	0.48	22.03			16,082
Itinerant GA Multi Engine	BEC58P	5.18	0.05	5.23			3,814
	BEC9F	13.31	1.68	13.84	1.14		10,941
	CNA441	12.78	1.61	13.36	1.03		10,503
Itinerant GA Business Jet	CIT3	2.03	0.21	2.03	0.22		1,639
	CL600	4.64	0.22	4.54	0.33		3,548
	CL601	0.35	0.02	0.35	0.02		268
	CNA500	0.14	0.00	0.14	0.00		102
	CNA55B	7.72	0.38	7.55	0.55		5,913
	CNA750	2.26	0.15	2.22	0.19		1,756
	FAL20	0.56	0.02	0.53	0.06		427
	GIB	1.82	0.11	1.84	0.09		1,409
	GIV	3.30	0.17	3.30	0.17		2,536
	IA1125	1.99	0.12	1.98	0.13		1,539
	LEAR25	2.48	0.65	2.63	0.50		2,284
	LEAR35	11.57	5.59	11.58	5.58		12,526
	MU3001	0.19	0.01	0.18	0.01		141
	SABR80	4.65	0.21	4.58	0.28		3,547
<b>Itinerant GA Operations (Total)</b>						<b>132,704</b>	<b>132,704</b>
Itinerant Air Taxi	BEC190	1.84	0.73	2.24	0.34		1,877
	BEC58P	7.29	1.29	8.08	0.51		6,265
	BEC9F	2.29	0.36	2.49	0.17		1,937
	CL600	1.36	0.07	1.34	0.09		1,042
	CNA441	6.34	1.37	7.41	0.30		5,627
	CNA55B	3.38	0.14	3.43	0.08		2,568
	CNA750	0.61	0.07	0.64	0.03		496
	DHC6	6.15	1.38	2.61	4.92		5,497
	DHC8	6.41	4.76	6.85	4.31		8,150
	EMB120	1.05	0.60	1.10	0.55		1,204
	EMB145	0.34	0.10	0.34	0.11		322
	EMB14L	0.12		0.07	0.05		87
	GIV	0.41	0.10	0.51			372
	IA1125	0.24		0.24			174
	HS748A	8.89	0.69	8.84	0.75		6,998
	LEAR35	7.17	3.47	8.19	2.46		7,773
SF340	3.39	0.05	0.26	3.18		2,513	
<b>Itinerant Air Taxi Operations (Total)</b>						<b>52,903</b>	<b>52,903</b>
Itinerant Military	GIB						0
	C130	0.28		0.28			201
	DHC6	2.16		2.16			1,577
<b>Itinerant Military Operations (Total)</b>						<b>1,778</b>	<b>1,778</b>
<b>Grand Totals</b>		<b>406.78</b>	<b>31.80</b>	<b>409.50</b>	<b>31.52</b>	<b>321,945</b>	<b>321,945</b>

## Time of Day

In the DNL metric, a 24-hour day is broken down into day and night. Day is defined as 7 A.M. – 10 P.M., and night is defined as 10 P.M. – 7 A.M.; aircraft are penalized by adding 10 dBA to each nighttime operation. The nighttime penalty accounts for the lower ambient noise levels. The overall percentage of nighttime operations at Centennial Airport was 7.2% as summarized in Table D6, entitled *SUMMARY HOURS OF NIGHTTIME OPERATIONS BY CATEGORY, YEAR 2005/2006*; of the 882 average daily operations, 63 operations occur between 10 P.M. and 7 A.M. The specific INM categories percentages of daytime and nighttime operations were presented in Table D5.

Table D6  
**SUMMARY HOURS OF NIGHTTIME OPERATIONS BY CATEGORY, YEAR  
 2005/2006**  
*Centennial Airport DNL Noise Contour Update*

Category	Percentage Nighttime Operations		
	Arrivals	Departures	Average
Single Engine Local	0.0%	0.0%	0.0%
Single Engine Itinerant	7.3%	3.5%	5.4%
Multi Engine Local	3.0%	2.0%	2.5%
Multi Engine Itinerant	9.7%	3.7%	6.7%
Turboprop	16.8%	20.5%	18.7%
Business Jet	17.1%	15.8%	16.4%
Helicopter	0.0%	0.0%	0.0%
Military	0.0%	0.0%	0.0%
<b>TOTAL</b>	<b>7.2%</b>	<b>7.1%</b>	<b>7.2%</b>

Source: BridgeNet International

## Runway Use

An additional, important consideration in developing the noise exposure contours is the percentage of time each runway is used. The speed and direction of the wind dictate the direction in which the runways is operated. In general, aircraft operate into the wind – landing into the wind and departing into the wind. When the wind direction changes, the operations are shifted to the runway end that favors the new wind direction.

The existing runway use percentages presented in Table D8 are based upon ATC personnel estimates. The table presents the percentage that each runway was used during the daytime, and nighttime hours.

The data show that the Airport is in south flow (departing to the south and arriving from the north) about 57% of the time, north flow (departing to the north and arriving from the south) 37% of the time. The cross-wind runway (departing to the southeast and arriving from the southeast) is used less than 10% of the time.

Table D8  
**PERCENTAGE RUNWAY UTILIZATION**  
*Centennial Airport DNL Noise Contour Update*

Name	Arrival Daytime	Arrival Nighttime	Departure Daytime	Departure Nighttime
17L	38.6%	56.1%	39.1%	57.2%
17R	20.2%	2.2%	19.8%	2.5%
35L	13.4%	1.8%	19.4%	16.2%
35R	24.4%	22.8%	18.5%	22.7%
10	0%	0%	3.4%	1.4%
28	3.4%	1.1%	0%	0%

Source: BridgeNet International

The runway use information, obtained from the previously identified sources, enables the identification of each runway used by each operation. Therefore, runway use can be aircraft-type specific. Different aircraft have different runway uses based upon aircraft size, performance, and operation type (e.g. touch and go).

The more detailed breakdown of runway use by category of aircraft is presented in Table D9. The table includes the percentage of operations by aircraft category using each of the runways. Note that local general aviation operations are touch and go's and use Runway 17R most often.

Table D9  
**RUNWAY UTILIZATION BY CATEGORY OF AIRCRAFT**  
*Centennial Airport DNL Noise Contour Update*

<b>Aircraft Class</b>	<b>17L</b>	<b>17R</b>	<b>35L</b>	<b>35R</b>	<b>10</b>	<b>28</b>	<b>H1</b>	<b>H2</b>
<b>ARRIVALS</b>								
Single Engine Local	6%	51%	33%	4%	0%	6%	---	---
Single Engine Itinerant	54%	6%	4%	33%	0%	3%	---	---
Multi Engine Local	51%	6%	4%	33%	0%	6%	---	---
Multi Engine Itinerant	54%	6%	4%	33%	0%	3%	---	---
Turboprop	56%	3%	2%	37%	2%	---	---	---
Business Jet	56%	3%	2%	37%	2%	---	---	---
Helicopter	---	---	---	---	---	---	50%	50%
Military	30%	---	20%	---	---	---	25%	25%
<b>DEPARTURES</b>								
Single Engine Local	6%	51%	33%	4%	6%	0%	---	---
Single Engine Itinerant	54%	6%	4%	33%	3%	0%	---	---
Multi Engine Local	51%	6%	4%	33%	6%	0%	---	---
Multi Engine Itinerant	54%	6%	4%	33%	3%	0%	---	---
Turboprop	56%	3%	2%	37%	2%	0%	---	---
Business Jet	59%	---	40%	---	1%	---	---	---
Helicopter	---	---	---	---	---	---	50%	50%
Military	30%	---	20%	---	---	---	25%	25%

Source: BridgeNet International

## Flight Paths/Tracks and Flight Path Use

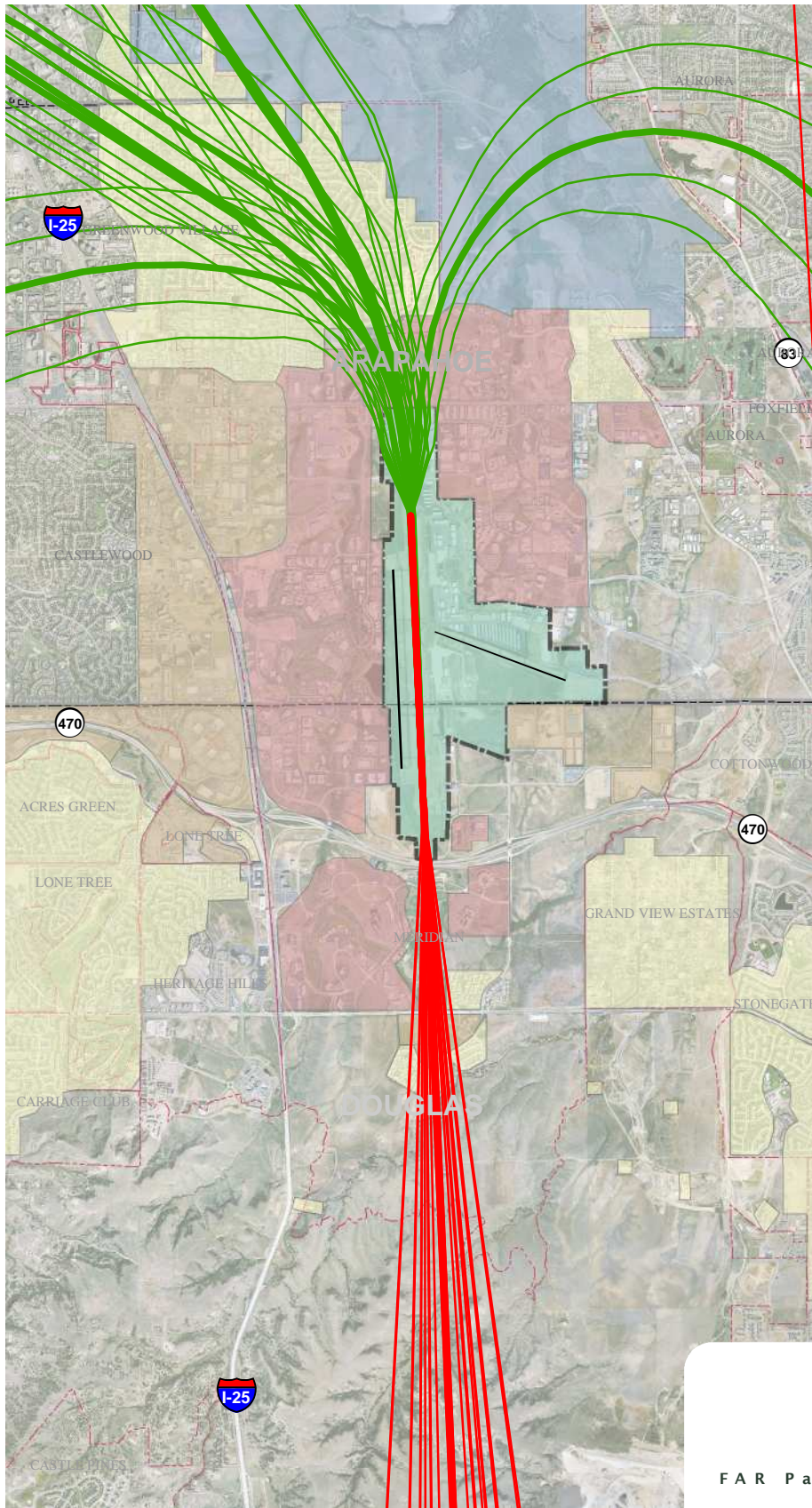
The Federal Aviation Administration (FAA) has established paths (oftentimes referred to as tracks) for aircraft arriving and departing from Centennial Airport. These paths are not precisely defined ground tracks, but represent a path along the ground over which aircraft generally fly. The identification of the location and use of the flight path is based upon field observations, discussions with Airport Authority and FAA ATC staff, and discussions with FBO staff.

In the development of the noise contours, the INM noise model requires aggregating the flight paths into a set of generalized flight tracks of aircraft operating at the Airport. In the INM noise model, a flight track consists of a backbone or center flight path, and the dispersion, or spread, of all flights that use the backbone. This dispersion includes ancillary flight tracks to the backbone; for the Centennial Airport DNL contour update, each flight track has one backbone and four ancillary flight tracks, two on either side of the backbone. The backbone and ancillary tracks are each assigned a percentage of the operations. This dispersion off the backbone is depicted in the flight track

graphic by a shaded swath or corridor. This corridor is representative of where the majority of aircraft on each path fly.

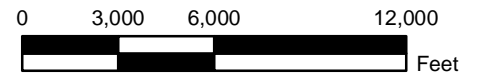
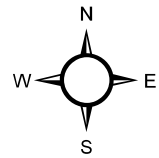
Flight tracks for different operational conditions are presented in the following figures. Flight tracks for jet aircraft north flow conditions (aircraft departing and arriving on Runways 35R) are presented in Figure D8. Flight tracks for jet aircraft in south flow conditions (aircraft departing and arriving on Runways 17L) are shown in Figure D9. Flight tracks for east flow conditions (aircraft departing and arriving on Runway 10) are shown in Figure D10 for propeller aircraft. Example flight tracks for touch and go operations are presented in Figure D10.

The modeling analysis for existing conditions included a total of 18 departure flight paths, 17 arrival flight paths and 6 touch-and-go patterns (4 fixed wing and 2 helicopter) at the Airport. The flight paths modeled in the study were those within approximately 10 miles of the noise contour study area.



**Land Use Legend**

-  AIRPORT
-  BUSINESS/OFFICE PARK
-  MIXED NON-RESIDENTIAL
-  PUBLIC USE
-  RESIDENTIAL



**PRELIMINARY**

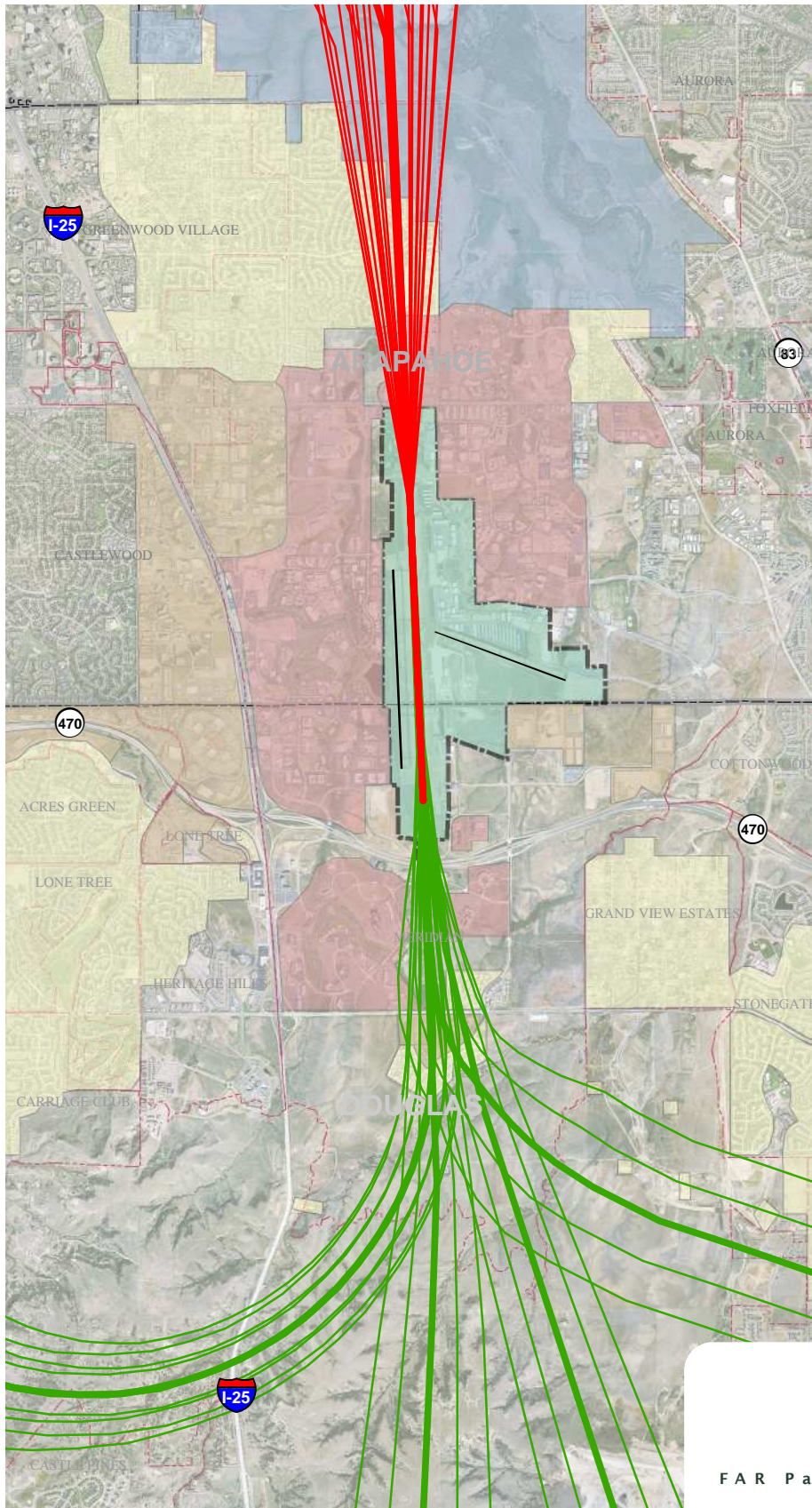
**Centennial  
Airport**

FAR Part 150 Noise Exposure  
& Land Use Compatibility  
Study Program



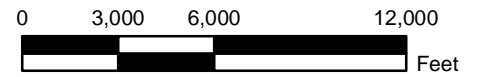
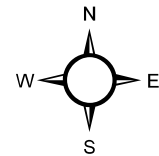
Figure D8 INM FLIGHT TRACKS, NORTH FLOW (JETS)





**Land Use Legend**

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-  MIXED NON-RESIDENTIAL
-  PUBLIC USE
-  RESIDENTIAL



**PRELIMINARY**

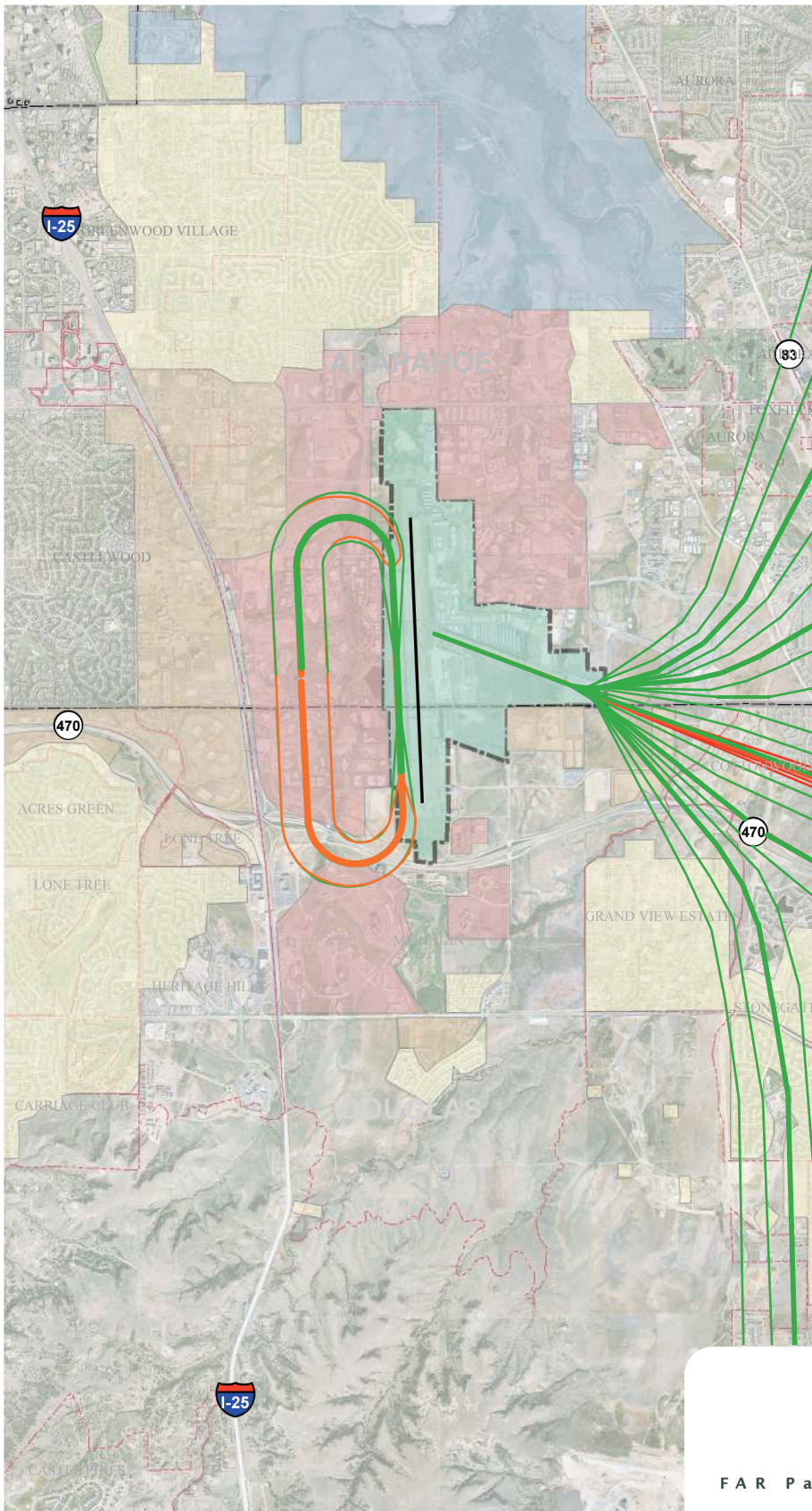
**Centennial  
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FAR Part 150 Noise Exposure  
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Study Program



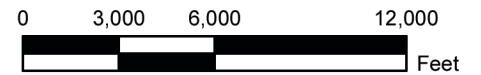
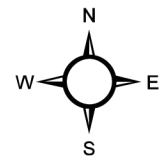
Figure D9 INM FLIGHT TRACKS, SOUTH FLOW (JETS)





### Land Use Legend

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-  MIXED NON-RESIDENTIAL
-  PUBLIC USE
-  RESIDENTIAL



## Centennial Airport

FAR Part 150 Noise Exposure  
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Study Program



Figure D10 **TOUCH AND GO FLIGHT TRACKS (FIXED WING) & CROSSWIND TRACKS**



## Existing Baseline Noise Conditions

Based upon the operational conditions presented above and the INM noise model, noise contours were developed. As required by the FAA, the primary noise metric to describe the existing noise environment is DNL.

*DNL Noise Contours.* The existing (2005/2006) DNL noise exposure contours for Centennial Airport are presented in Figure D12. This figure shows the 65 DNL, 70 DNL, and 75 DNL noise exposure contours.

*Population Analysis.* The existing housing units and population counts associated with the existing noise contours are shown in the following table. The population counts are based on the 2000 census information, coupled with housing counts derived from an aerial photograph.

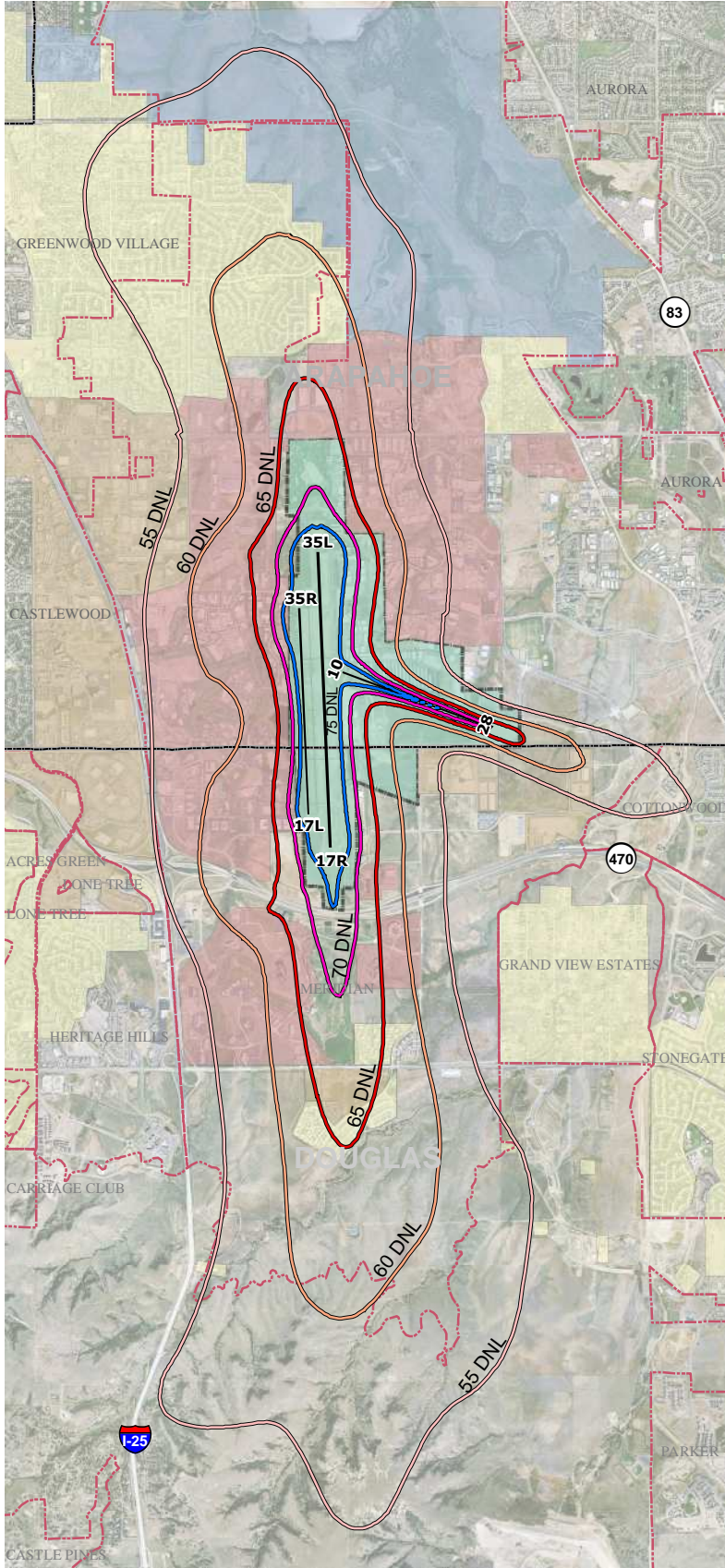
Table D10

### POPULATION AND HOUSING COUNTS, EXISTING NOISE CONTOURS






*Centennial Airport DNL Noise Contour Update*

	60 DNL Contour	65 DNL Contour	70 DNL Contour	75 DNL Contour
<b>Population</b>	3,240	140	30	0
<b>Housing Units</b>	1,070	110	20	0
<b>Residential Acres</b>	480	60	5	0
<b>Total Acres</b>	3,140	1,400	700	430






Source: US 2000 Census, Aerial Photograph, BDC Analysis, numbers rounded to nearest ten

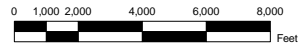
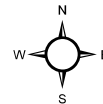


## Land Use Legend

-  AIRPORT
-  BUSINESS/OFFICE PARK
-  MIXED NON-RESIDENTIAL
-  PUBLIC USE
-  RESIDENTIAL

## 2006 DNL Contours

-  CONTOUR\_55-0
-  CONTOUR\_60-0
-  CONTOUR\_65-0
-  CONTOUR\_70-0
-  CONTOUR\_75-0



### SPONSOR'S CERTIFICATION

The 65 DNL Noise Contour Contains Approximately 1,400 acres and 140 people.

The 70 DNL Noise Contour Contains Approximately 700 acres and 30 people.

The 75 DNL Noise Contour Contains Approximately 430 acres and no people.

Planning Jurisdiction are as shown on the map.

Noise measurement sites and flight track are depicted on the Noise Measurement Sites and Flight Tracks Maps.

Residential land use is defined as incompatible within the 65 DNL Noise Contours or greater by FAA's FAR Part 150.

This Noise Map and accompanying documentation for the Noise Exposure Map for Centennial Airport, are submitted in accordance with Part 150 of the Federal Aviation Regulations (14 CFR 150). To the best of my knowledge and belief, this Noise Exposure Map was prepared with the best available information and on the basis of reasonable assumptions and are hereby certified as true, complete, and representative of future aircraft noise levels.

I also hereby certify that interested persons have been afforded adequate opportunity to submit their view, data, and comments concerning the correctness and adequacy of the draft noise exposure maps and descriptions of forecast aircraft operations; and on the formulation and adequacy of the Noise Compatibility Program and accompanying documentation.

Signed \_\_\_\_\_

Airport Manager  
Centennial Airport

Dated \_\_\_\_\_

# Centennial Airport

FAR Part 150 Noise Exposure  
& Land Use Compatibility  
Study Program



Figure 4 Existing 2006 Noise Exposure Map

## Future Noise Conditions

Based upon the operational conditions presented above and the INM noise model, noise contours were developed. As required by the FAA, the primary noise metric to describe the existing noise environment is DNL. Table D10 shows the aircraft fleet mix for future noise conditions.

DNL Noise Contours. The future (2012) DNL noise exposure contours for Centennial Airport are presented in Figure D13. This figure shows the 65 DNL, 70 DNL and 75 DNL noise exposure contours.

Population Analysis. The existing housing units and population counts associated with the future noise contours are shown in the following table. The population counts are based on the 2000 census information, coupled with housing counts derived from an aerial photograph.

Table D11

### POPULATION AND HOUSING COUNTS, FUTURE NOISE CONTOURS

*Centennial Airport DNL Noise Contour Update*

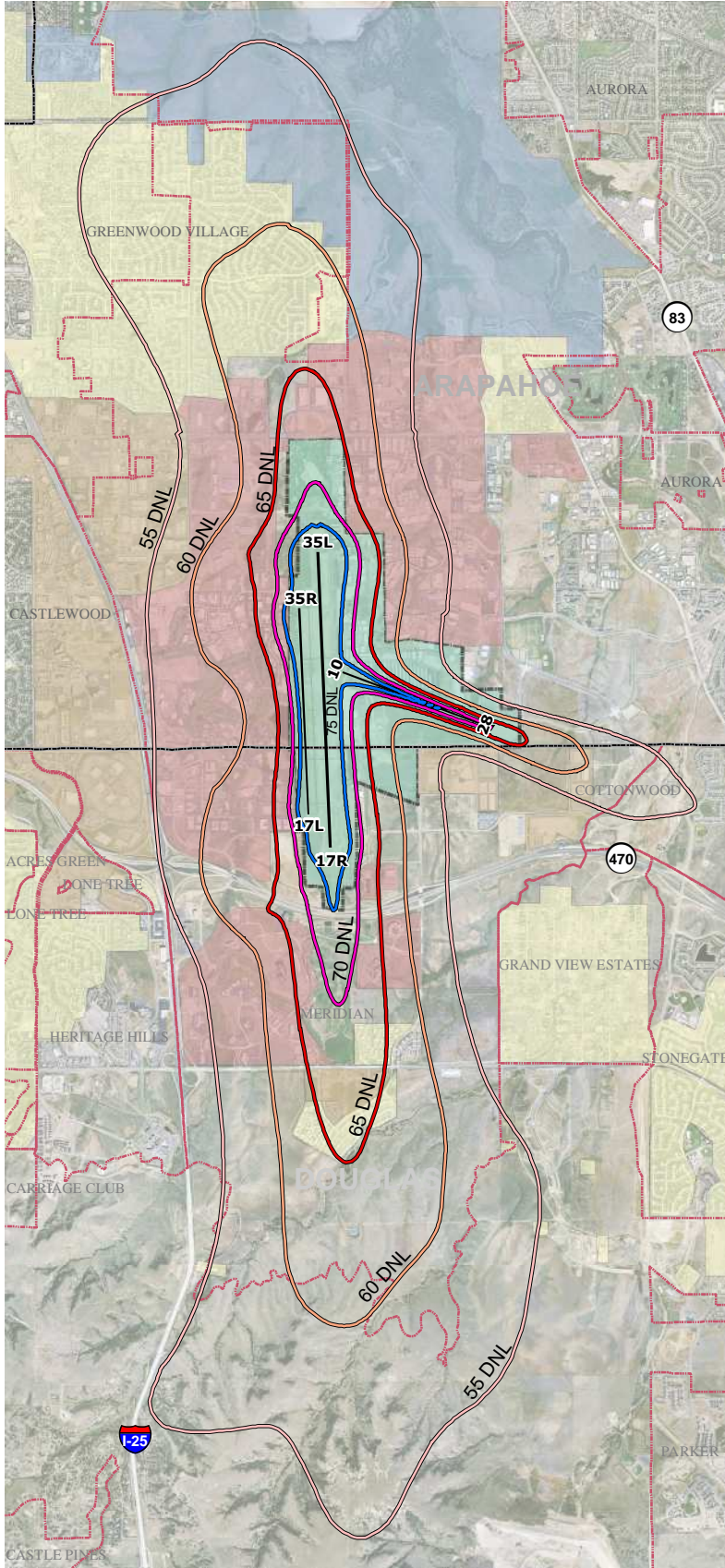
	60 DNL Contour	65 DNL Contour	70 DNL Contour	75 DNL Contour
<b>Population</b>	3,700	140	40	0
<b>Housing Units</b>	1,220	110	30	0
<b>Residential Acres</b>	550	80	5	0
<b>Total Acres</b>	3,210	1,470	710	450

Source: US 2000 Census, Aerial Photograph, BDC Analysis, numbers rounded to nearest ten

Table D10  
**AIRCRAFT FLEET MIX ASSUMPTIONS FOR FUTURE CONDITIONS**  
*Centennial Airport DNL Noise Contour Update*

Operations Category	INM Type	Daily Arrivals		Daily Departures		APO Terminal Area Forecast	Total Operations
		Day	Night	Day	Night		
Local GA Single Engine	GASEPF	74.34		74.34			54,266
	GASEPV	37.17		37.17			27,134
Local GA Multi Engine	BEC58P	15.12	1.18	15.72	0.58		11,900
Local GA Turbo	BEC9F	6.08	0.77	6.33	0.52		5,000
Local GA Helicopters	B206	2.33		2.33			1,700
<b>Local General Aviation (Total)</b>						<b>100,000</b>	<b>100,000</b>
Local Military	C130	0.23		0.23			169
	DHC6	1.82		1.82			1,331
<b>Local Military (Total)</b>						<b>1,500</b>	<b>1,500</b>
Itinerant GA Single Engine	CNA172	21.93	2.15	24.08			17,575
	GASEPF	54.90	0.40	53.23	2.07		40,369
	GASEPV	23.24	0.52	23.76			17,344
Itinerant GA Multi Engine	BEC58P	5.58	0.05	5.64			4,114
	BEC9F	14.36	1.81	14.93	1.23		11,800
	CNA441	13.78	1.73	14.40	1.11		11,327
Itinerant GA Business Jet	CIT3	3.07	0.32	3.06	0.33		2,474
	CL600	7.01	0.33	6.85	0.49		5,358
	CL601	0.38	0.02	0.38	0.02		291
	CNA500	0.15		0.15	0.00		111
	CNA55B	10.72	0.53	10.48	0.77		8,212
	CNA750	3.41	0.22	3.35	0.28		2,652
	FAL20	0.56	0.02	0.53	0.06		427
	GIIIB	1.82	0.11	1.84	0.09		1,409
	GIV	4.98	0.26	4.98	0.26		3,828
	IA1125	3.01	0.18	2.99	0.20		2,324
	LEAR25	2.48	0.65	2.63	0.50		2,284
	LEAR35	16.07	7.76	16.09	7.74		17,396
	MU3001	0.20	0.01	0.20	0.01		153
	SABR80	4.65	0.21	4.58	0.28		3,547
<b>Itinerant GA Operations (Total)</b>						<b>152,993</b>	<b>152,993</b>
Itinerant Air Taxi	BEC190	1.92	0.76	2.34	0.35		1,961
	BEC58P	7.62	1.35	8.44	0.53		6,546
	BEC9F	2.40	0.38	2.60	0.17		2,024
	CL600	1.42	0.07	1.40	0.09		1,089
	CNA441	6.62	1.43	7.74	0.32		5,878
	CNA55B	3.53	0.14	3.59	0.09		2,683
	CNA750	0.64	0.07	0.67	0.04		518
	DHC6	6.42	1.45	2.72	5.15		5,744
	DHC8	6.69	4.97	7.16	4.51		8,515
	EMB120	1.10	0.62	1.15	0.57		1,258
	EMB145	0.36	0.11	0.35	0.11		337
	EMB14L	0.12		0.07	0.05		91
	GIV	0.43	0.11	0.53			389
	IA1125	0.25		0.25			181
	HS748A	9.29	0.72	9.23	0.78		7,311
LEAR35	7.50	3.63	8.56	2.57		8,121	
SF340	3.55	0.05	0.27	3.32		2,626	
<b>Itinerant Air Taxi Operations ( Total)</b>						<b>55,272</b>	<b>55,272</b>
Itinerant Military	GIIIB	0.13		0.13			93
	C130	0.30		0.30			215
	DHC6	2.32		2.32			1,692
<b>Itinerant Military Operations (Total)</b>						<b>2,000</b>	<b>2,000</b>
<b>Grand Totals</b>		<b>389.37</b>	<b>35.09</b>	<b>391.89</b>	<b>35.19</b>	<b>311,765</b>	<b>311,765</b>



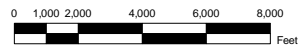
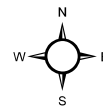


## Land Use Legend

### 2012 DNL Contours

- CONTOUR\_55-0
- CONTOUR\_60-0
- CONTOUR\_65-0
- CONTOUR\_70-0
- CONTOUR\_75-0

- AIRPORT
- BUSINESS/OFFICE PARK
- MIXED NON-RESIDENTIAL
- PUBLIC USE
- RESIDENTIAL



#### SPONSOR'S CERTIFICATION

The 65 DNL Noise Contour Contains Approximately 1,470 acres and 140 people.

The 70 DNL Noise Contour Contains Approximately 710 acres and 40 people.

The 75 DNL Noise Contour Contains Approximately 450 acres and no people.

Planning Jurisdiction are as shown on the map.

Noise measurement sites and flight track are depicted on the Noise Measurement Sites and Flight Tracks Maps.

Residential land use is defined as incompatible within the 65 DNL Noise Contours or greater by FAA's FAR Part 150.

This Noise Map and accompanying documentation for the Noise Exposure Map for Centennial Airport, are submitted in accordance with Part 150 of the Federal Aviation Regulations (14 CFR 150). To the best of my knowledge and belief, this Noise Exposure Map was prepared with the best available information and on the basis of reasonable assumptions and are hereby certified as true, complete, and representative of future aircraft noise levels.

I also hereby certify that interested persons have been afforded adequate opportunity to submit their view, data, and comments concerning the correctness and adequacy of the draft noise exposure maps and descriptions of forecast aircraft operations; and on the formulation and adequacy of the Noise Compatibility Program and accompanying documentation.

Signed \_\_\_\_\_

Airport Manager  
Centennial Airport

Dated \_\_\_\_\_

## Centennial Airport

FAR Part 150 Noise Exposure  
& Land Use Compatibility  
Study Program



Figure 5 Future 2012 Noise Exposure Map