



# The 2001 Annual Noise Report



## Introduction

This report is published by the DIA Noise Abatement Office as part of DIA's commitment to minimize noise impacts in the airport environs. Although the Federal Aviation Administration (FAA) is the sole authority for the control of aircraft, the City and County of Denver, as airport proprietor, has taken the lead responsibility for monitoring and addressing DIA aircraft noise issues in the vicinity of the airport.

The focus of this report is on the data collected by DIA's Airport Noise and Operations Monitoring System (ANOMS) throughout the Noise Year 2001. Information contained in this publication include Noise Exposure Performance Standards (NEPS) values, maps depicting DIA's 65 Ldn noise contour, as well as aircraft operations statistics, and runway use percentages.

## DIA Airport Noise and Operations Monitoring System

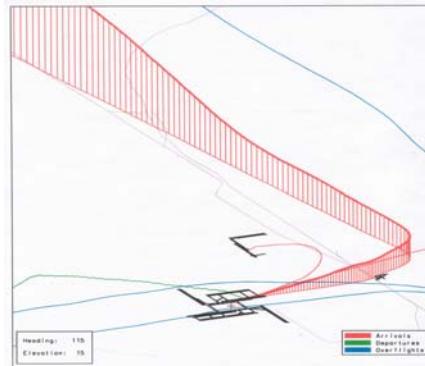


The Denver International Airport – Airport Noise and Operations Monitoring System (ANOMS) is a state-of-the-art computer system designed to enable the City and County of Denver to monitor aircraft noise in the vicinity of the airport. In addition to monitoring noise levels, the system calculates Noise Exposure Performance Standards (NEPS) at 101 grid points in Adams County (see map page 3).

The DIA ANOMS system monitors noise levels at 28 permanent and 4 portable noise monitoring terminals. These terminals are located throughout the Denver metro area.

The system also records the movement of all aircraft in the vicinity of DIA by utilizing FAA air traffic control radar data. This makes it possible to

match actual flights with noise events. In addition, the ANOMS system records weather information from three remote stations, which include a RACAL recording device to record pilot/controller radio transmissions.



**ANOMS Output**



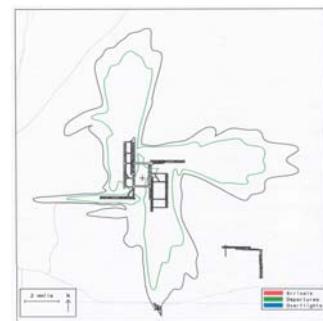
## ARTSMAP

ARTSMAP is a specially designed noise modeling program that automatically creates noise contours. ARTSMAP is designed to create contours from actual radar flight tracks that DIA receives from the FAA ARTS system which is sent to our office via modem, eliminating the need for manual data manipulation. The ARTSMAP software is installed on a computer in the Noise Abatement Office. The program analyzes, views, reports, and stores the data. Currently, ARTSMAP is used at several major airports nationally. It allows the DIA Noise Abatement Office to perform noise data analysis, generate daily automated noise contours, receive detailed runway utilization and airline fleet mix identification, and generate landing fee reports.

## Land Use/Zoning



Controlling the growth and types of development in the areas surrounding DIA is of utmost concern to the City and County of Denver. The Noise Office has developed noise contours surrounding the airport, inside which certain types of development are allowed to occur. The 65 Ldn (average decibel level with a 10 decibel penalty applied at operations at night) is a line inside which, under Federal Guidelines, no residential development should occur (see contour map below). This noise contour is used at DIA for land use and planning by the surrounding jurisdictions.



**IGA Baseline Contour 60 Ldn (Black) 65 Ldn (Green)**

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**DIA Noise Hotline Policy**

The purpose of the DIA Noise Complaint Hotline is to provide an opportunity for individuals to express their concerns regarding noise generated by aircraft operating at DIA. The noise complaint system has been designed to ask several questions relative to the concerns of citizens. Once this information has been correctly entered, it is then transcribed into the ANOMS system, where specific complaints can be matched to individual flight tracks. It is essential for all information to be entered correctly in order for the system to be effective. In certain rare cases where a call is placed from an area with a weak or noisy phone line, the Hotline system may fail to properly record the complaint. We have created four methods for registering complaints. They include calling the Hotline at (303) 342-2380, or toll free 1-800-417-2988, also complaints may be faxed to (303) 342-2366, and finally, complaints may be emailed to [Noise.Office@diadenver.net](mailto:Noise.Office@diadenver.net).



Profanity will not be tolerated, and will result in the complaint not being registered. Any attempt to deliberately tie-up or abuse the Hotline may result in police action. Phone harassment is a state criminal offense and can carry a jail sentence and/or fine. Threats involving aircraft and/or the airport are a very serious matter and are a federal criminal offense. To make a threat, even jokingly, will result in a notification to the Denver Police Department and may involve an FBI investigation.

**Glossary of Terms**

**Sound:** A rapid variation in air pressure, which is perceived by the ear and brain as sound.

**Noise:** Generally considered to be any sound, which is deemed undesirable by an individual.

**Decibel:** Sound is measured by its pressure or energy in terms of decibels. The decibel scale is logarithmic; when the decibel level increases by 6 dB, the measured sound is twice as loud.

**Noise Abatement:** A measure or action that minimizes the amount or impact of noise on the environs of an airport. Noise abatement measures include aircraft operating procedures and use or disuse of certain runways or flight tracks. These operating procedures are controlled by the FAA.

**A-Weighted Sound Level (dBA):** A type of sound level measurement which reduces the effect of very high and very low frequencies in order to mimic the response of the human ear. Nearly all aircraft sound level measurement is conducted using A-weighting.

**Equivalent Continuous Sound Level (L<sub>eq</sub>):** A measurement of the average sound energy experienced over a period of time. This average sound level is expressed in decibels, and includes a notation of the period of time, which it covers (such as L<sub>eq</sub> (24) for an average of the sound level over a 24-hour period).

**Day Night Level (L<sub>dn</sub>):** Also referred to as DNL. Similar to an L<sub>eq</sub> measurement, but is conducted over at least a 24-hour time span and includes a 10dB nighttime penalty. For an L<sub>dn</sub> calculation, all noise that occurs at night (defined as 10:00 pm to 7:00 am) is artificially increased for the public's increased sensitivity to noise during these hours.

**Noise Contour:** A line surrounding an airport that encloses a geographic region, which is exposed to a particular L<sub>dn</sub> level. These contour lines are nested in such a way that contours closer to the airport generally surround areas that experience a higher noise levels than contours farther out. Annual L<sub>dn</sub> contours are used to determine whether certain types of zoning or land uses are compatible with particular annual L<sub>dn</sub> noise levels. 65 L<sub>dn</sub> is considered by many federal agencies to be the level at which residential land use becomes incompatible.

**Remote Monitoring Terminal (RMT):** Consists of a noise level analyzer, a weatherproof microphone, a system controller, a power supply, and a dedicated telephone line to download noise data to the ANOMS system, all mounted in a weatherproof cabinet.

**Questions / Comments?**

We have tried to make it easier for you to contact the Noise Abatement Office. If you have any questions or comments, please feel free to contact us by using any of the methods listed below.



Noise Abatement Office Computer Room

**Phone:** (303) 342-2000

**Fax:** (303) 342-2366

**Email:** [Noise.office@diadenver.net](mailto:Noise.office@diadenver.net)

**Mailing Address:**

Noise Abatement Office  
Denver International Airport  
8500 Peña Boulevard  
Denver, CO 80249

**Noise Complaint Hotline:**

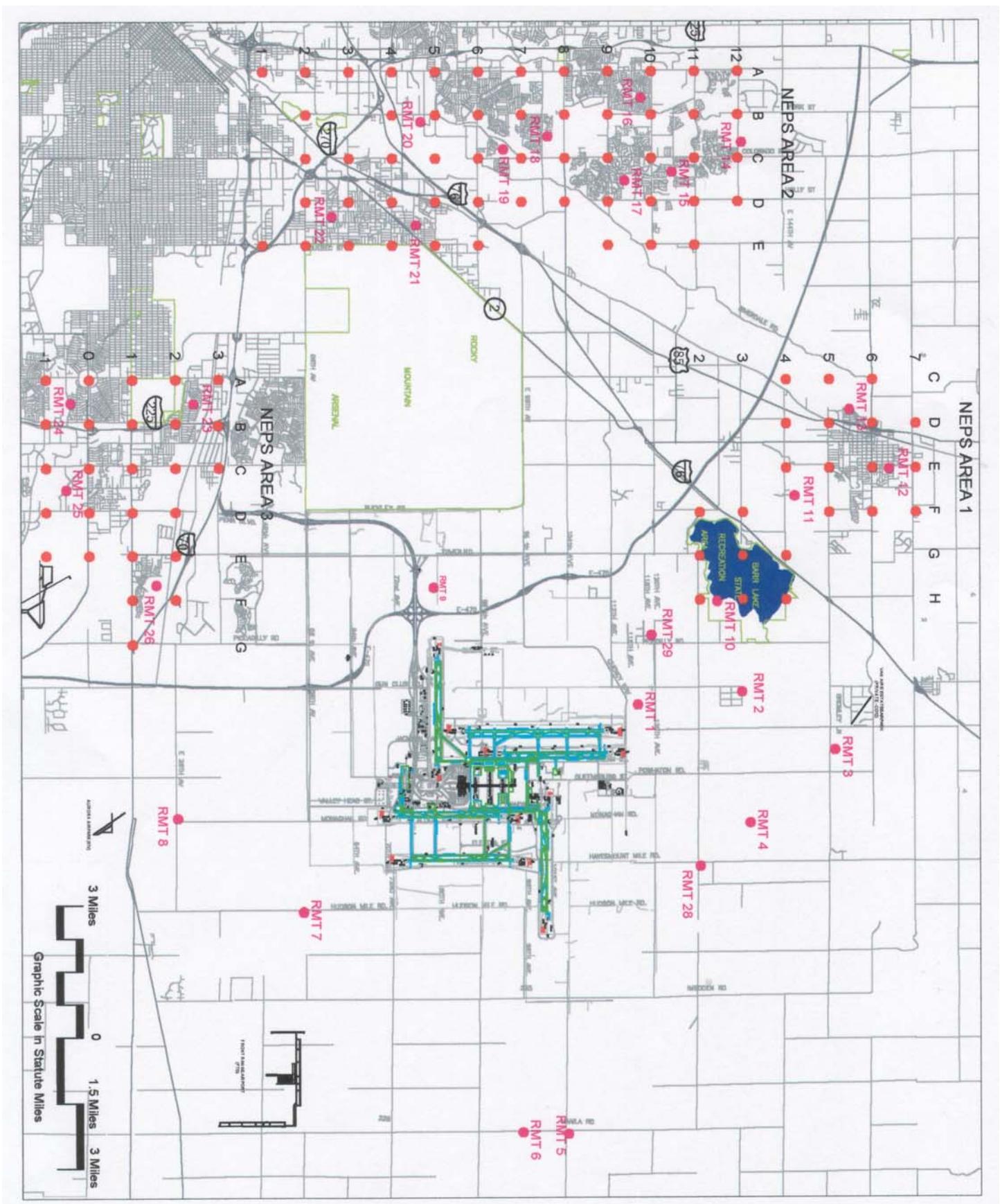
(303) 342-2380

Toll Free 1-800-417-2988



  
DENVER INTERNATIONAL  
AIRPORT

## Noise Exposure Performance Standards (NEPS) Grid Coordinates and Remote Monitoring Terminals (RMT) Locations



## Comparison

**IGA Annual  $L_{eq}$  NEPS Values**

**Vs.**

**September 12, 2001 RMT  $L_{eq}$  Values**

*This section compares IGA Annual  $L_{eq}$  values with ambient levels measured on September 12, 2001.*

*As there were no DIA aircraft operations on September 12, the measured levels for that day represent the sum total of noise produced by non-aircraft sources (such as road traffic, wind, lawnmowers, etc.).*

**Comparison - IGA Annual L<sub>eq</sub> NEPS Values vs. September 12, 2001 RMT L<sub>eq</sub> Values**

<b>Area 2</b>		
Grid Points	IGA Annual Leq (24)	9/12/2001 RMT Leq (24)
A,1	38.6	
A,2	37.6	
A,3	42.3	
A,4	45.3	
A,5	43.9	
A,6	37.5	59
A,7	37.7	59
A,8	36.5	
A,9	36.3	57.9
A,10	37.6	57.9
A,11	39.2	
A,12	41.2	
B,2	39.5	
B,4	42.5	53
B,5	43.1	53
B,6	39.0	65.2
B,7	39.0	59.8, 65.2, 59.0
B,8	38.0	59.8
B,9	38.3	57.9
B,10	39.0	57.9
B,11	40.4	
B,12	42.6	57.2
C,2	41.0	
C,3	43.3	
C,4	43.5	
C,5	43.4	53
C,6	43.3	65.2
C,7	43.3	59.8, 65.2
C,8	42.6	59.8
C,9	42.2	49.1
C,10	41.6	54.8, 49.1
C,11	42.5	54.8
C,12	44.3	57.2
D,2	41.7	58.2
D,3	46.2	58.2
D,4	48.4	57.2
D,5	48.2	57.2
D,6	46.2	
D,7	44.2	
D,8	43.7	
D,9	43.1	49.1
D,10	44.9	54.8, 49.1
D,11	44.5	54.8
D,12	45.1	
E,1	42.4	
E,2	42.2	
E,3	46.7	58.2
E,4	51.2	57.2
E,5	51.0	57.2
E,6	44.6	
E,9	43.1	
E,10	43.1	
E,11	46.1	

<b>Area 1</b>		
Grid Points	IGA Annual Leq (24)	9/12/2001 RMT Leq (24)
C,4	44.2	
C,5	36.7	55
C,6	36.0	55
D,4	41.1	
D,5	34.2	55
D,6	36.0	55
D,7	41.4	
E,4	38.3	51.6
E,5	34.8	51.6
E,6	36.7	65
E,7	41.4	65
F,2	51.7	
F,3	43.7	
F,5	37.3	51.6
F,6	38.5	
F,7	42.1	
G,2	51.2	
G,3	42.1	
G,4	40.2	
H,2	50.1	53.9
H,3	46.0	53.9
H,4	46.1	

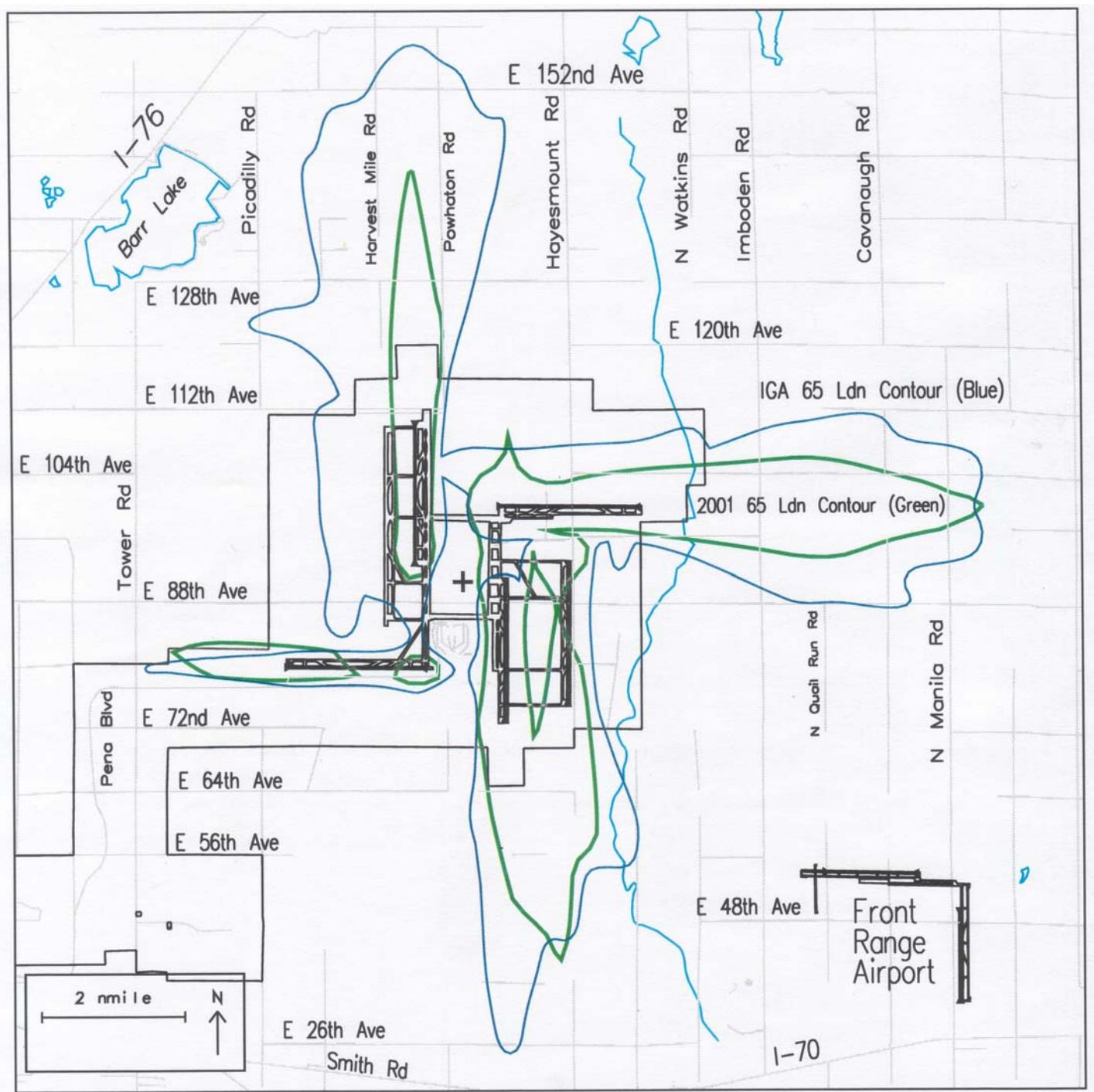
<b>Area 3</b>		
Grid Points	IGA Annual Leq (24)	9/12/2001 RMT Leq (24)
A,-1	38.9	53.3
A,0	39.6	53.3
A,1	43.2	
A,2	45.7	56.4
A,3	45.6	
B,-1	37.9	53.3
B,0	39.2	53.3
B,1	42.6	
B,2	45.8	56.4
B,3	45.7	56.4
C,-1	36.7	58.5
C,0	37.1	58.5
C,1	39.5	
C,2	44.8	
C,3	46.5	
D,-1	32.6	58.5
D,0	33.3	58.5
D,1	37.3	
D,2	43.0	
E,-1	31.4	
E,0	33.1	
E,1	36.2	58
E,2	40.6	
F,1	36.5	58
F,2	39.4	58
G,1	42.5	

## **Annual 2001**

**March 1, 2001 – February 28, 2002**

**(Please Note: Does not include the impact of extraordinary weather to the NEPS Values)**

**2001 Annual - 65 Ldn Contour**



## 2001 Annual - Denver/Adams County IGA NEPS Values

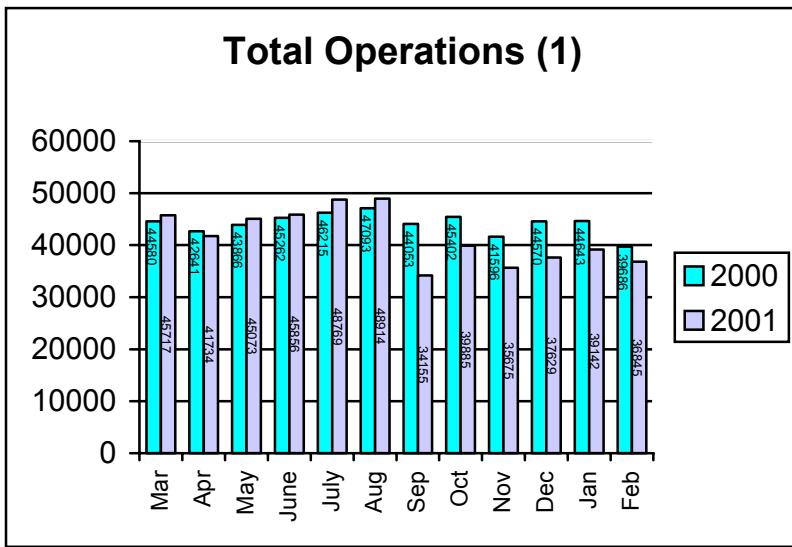
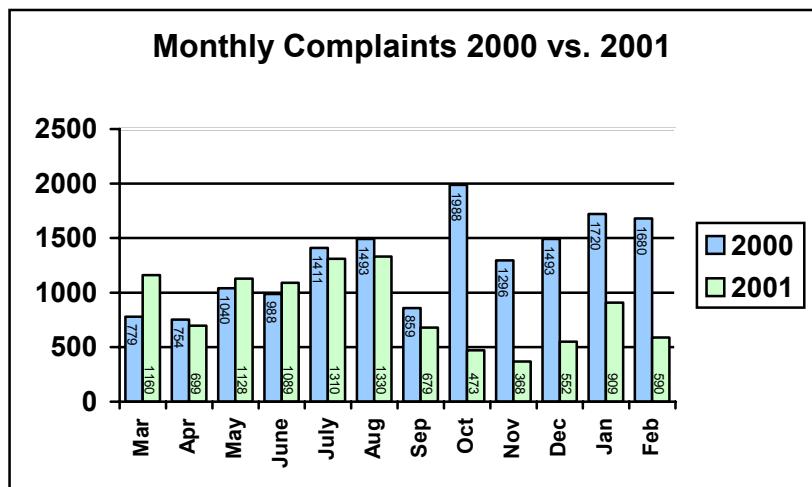
Area 2				Area 1			
Grid	IGA Annual	Calculated	Difference	Grid	IGA Annual	Calculated	Difference
Points	Leq (24)	Leq (24)	Leq	Points	Leq (24)	Leq (24)	Leq
A,1	38.6	37.7	-0.9	C,4	44.2	39.3	-4.9
A,2	37.6	38.4	0.8	C,5	36.7	37.0	0.3
A,3	42.3	39.2	-3.1	C,6	36.0	35.7	-0.3
A,4	45.3	39.9	-5.4	D,4	41.1	37.6	-3.5
A,5	43.9	41.0	-2.9	D,5	34.2	36.0	1.8
A,6	37.5	41.2	3.7	D,6	36.0	35.5	-0.5
A,7	37.7	41.3	3.6	D,7	41.4	36.3	-5.1
A,8	36.5	40.2	3.7	E,4	38.3	38.3	0.0
A,9	36.3	37.9	1.6	E,5	34.8	38.2	3.4
A,10	37.6	37.3	-0.3	E,6	36.7	36.5	-0.2
A,11	39.2	37.1	-2.1	E,7	41.4	36.3	-5.1
A,12	41.2	36.5	-4.7	F,2	51.7	44.5	-7.2
B,2	39.5	39.0	-0.5	F,3	43.7	41.6	-2.1
B,4	42.5	40.6	-1.9	F,5	37.3	38.2	0.9
B,5	43.1	41.7	-1.4	F,6	38.5	37.9	-0.6
B,6	39.0	41.9	2.9	F,7	42.1	38.0	-4.1
B,7	39.0	42.0	3.0	G,2	51.2	46.4	-4.8
B,8	38.0	40.3	2.3	G,3	42.1	42.4	0.3
B,9	38.3	38.6	0.3	G,4	40.2	40.2	0.0
B,10	39.0	38.6	-0.5	H,2	50.1	47.7	-2.4
B,11	40.4	38.4	-2.0	H,3	46.0	43.1	-2.9
B,12	42.6	37.9	-4.7	H,4	46.1	40.1	-6.0
C,2	41.0	40.0	-1.0	Area 3			
C,3	43.3	40.8	-2.5	2001 Annual			
C,4	43.5	41.4	-2.1	Grid	IGA Annual	Calculated	Difference
C,5	43.4	42.7	-0.7	Points	Leq (24)	Leq (24)	Leq
C,6	43.3	42.9	-0.4	A,-1	38.9	34.4	-4.5
C,7	43.3	42.7	-0.6	A,0	39.6	34.6	-5.0
C,8	42.6	40.6	-2.0	A,1	43.2	35.4	-7.9
C,9	42.2	39.8	-2.4	A,2	45.7	36.5	-9.2
C,10	41.6	40.0	-1.6	A,3	45.6	37.6	-8.0
C,11	42.5	39.9	-2.6	B,-1	37.9	34.1	-3.8
C,12	44.3	39.3	-5.0	B,0	39.2	34.3	-4.9
D,2	41.7	40.8	-0.9	B,1	42.6	34.9	-7.7
D,3	46.2	41.9	-4.3	B,2	45.8	36.0	-9.8
D,4	48.4	42.4	-6.0	B,3	45.7	37.4	-8.3
D,5	48.2	43.9	-4.4	C,-1	36.7	34.5	-2.2
D,6	46.2	44.0	-2.2	C,0	37.1	34.5	-2.6
D,7	44.2	43.5	-0.8	C,1	39.5	34.9	-4.6
D,8	43.7	41.2	-2.5	C,2	44.8	36.2	-8.6
D,9	43.1	41.6	-1.5	C,3	46.5	37.6	-8.9
D,10	44.9	41.7	-3.2	D,-1	32.6	35.1	2.5
D,11	44.5	41.0	-3.5	D,0	33.3	35.1	1.8
D,12	45.1	40.1	-5.0	D,1	37.3	35.4	-1.9
E,1	42.4	40.4	-2.0	D,2	43.0	36.5	-6.5
E,2	42.2	41.5	-0.7	E,-1	31.4	35.6	4.2
E,3	46.7	42.9	-3.8	E,0	33.1	35.6	2.5
E,4	51.2	43.5	-7.7	E,1	36.2	35.8	-0.4
E,5	51.0	45.1	-5.9	E,2	40.6	36.9	-3.8
E,6	44.6	45.3	0.6	F,1	36.5	36.3	-0.2
E,9	43.1	43.5	0.4	F,2	39.4	37.5	-1.9
E,10	43.1	42.4	-0.7	G,1	42.5	36.6	-6.0
E,11	46.1	41.2	-4.9				

## 2001 Annual - Complaint Statistics

Number of Complaints		2001	2000
Total number of noise complaints		10,287	15,500
Total number of hotline callers/households		457/411	992/876
Max # of complaints by an individual/household		2906/2906	4456/4456

Breakdown by time of day		2001	%	2000	%
Day Hours (7:00 am – 9:59 pm)		8,649	84.0	13,147	84.8
Night Hours (10:00 pm – 6:59 am)		1,638	16.0	2,353	15.2
All Hours		10,287	100.00	15,500	100.00

Breakdown By Month							
1q01		2q01		3q01		4q01	
March	1160	June	1089	September	679	December	552
April	699	July	1310	October	473	January	909
May	1128	August	1330	November	368	February	590
Total	2987		3729		1520		2051

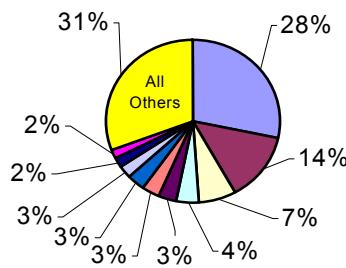


- (1) Total Operations includes Air Carrier, General Aviation, (2) and Air Taxi. Source: Federal Aviation Administration

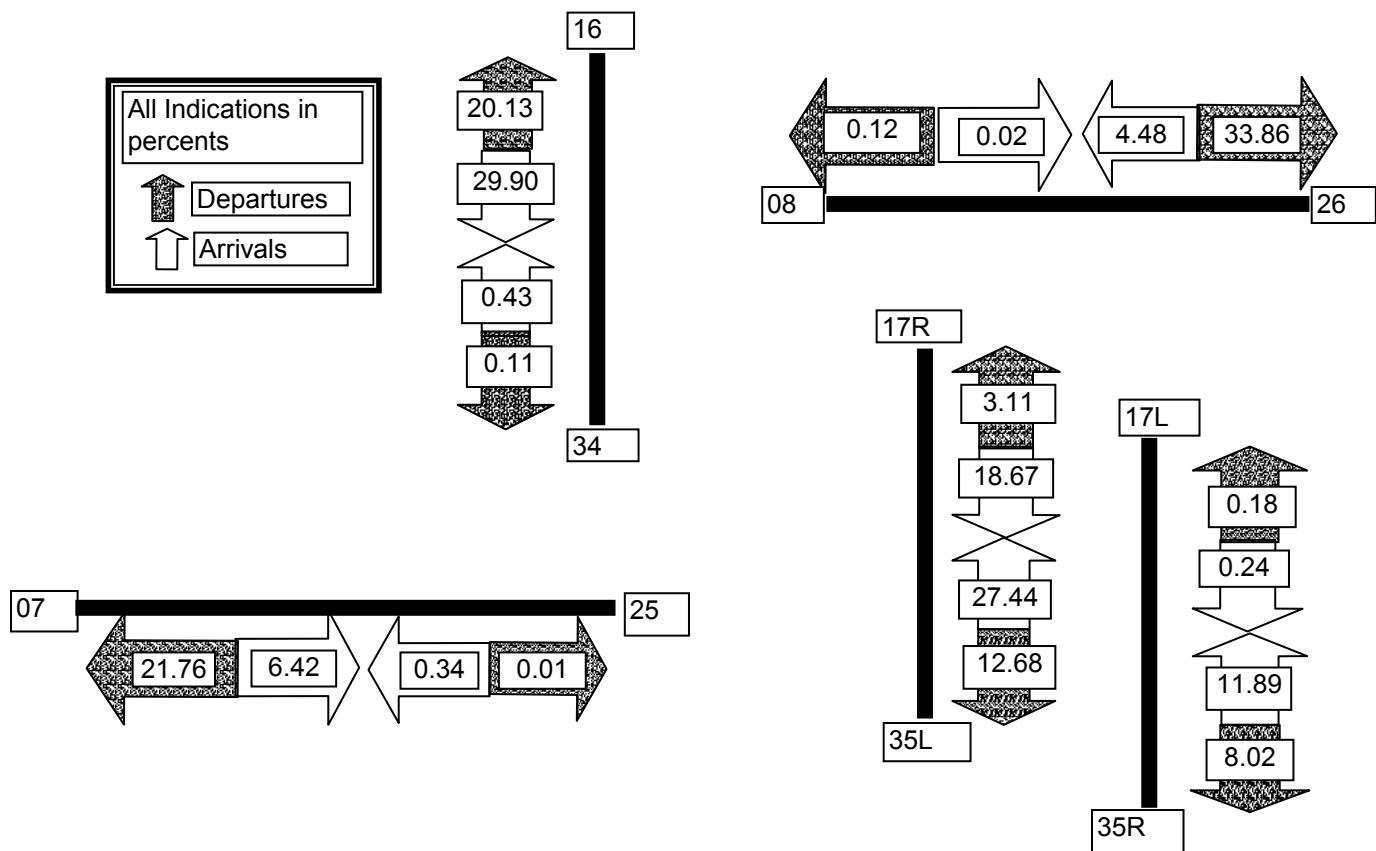
City	City Total	Households	Max #*
Blank	2	2	1
Arvada	7	2	6
Aurora	557	46	268
Bennett	51	4	28
Boulder	971	29	695
Brighton	471	31	346
Broomfield	4	3	2
Castle Rock	15	4	11
Commerce City	68	12	33
Conifer	6	2	5
Denver	165	62	26
Elizabeth	385	25	157
Englewood	1	1	1
Estes Park	7	2	6
Evergreen	438	3	428
Federal Heights	1	1	1
Fort Collins	31	1	31
Fort Lupton	1	1	1
Franktown	31	5	25
Golden	75	9	52
Henderson	3	2	2
Highlands Ranch	1	1	1
Hudson	11	5	4
Kiowa	2	2	1
Lafayette	5	2	4
Lakewood	470	6	343
Larkspur	42	5	34
Littleton	2	2	1
Lonetree	1	1	1
Louisville	19	2	18
Louviers	22	1	22
Lyons	4	2	3
Morrison	11	1	11
Nederland	3520	17	2906
Northglenn	13	9	3
Parker	480	39	205
Pine	2	1	2
Sedalia	3	2	2
Superior	11	1	11
Thornton	151	36	28
Watkins	1664	18	1417
Westminster	555	8	340
Wheatridge	6	2	5
Windsor	2	1	2
<b>Total</b>	<b>10287</b>	<b>411</b>	<b>7489</b>

\* This column further breaks down the household category by depicting the highest number of complaints from an individual household.

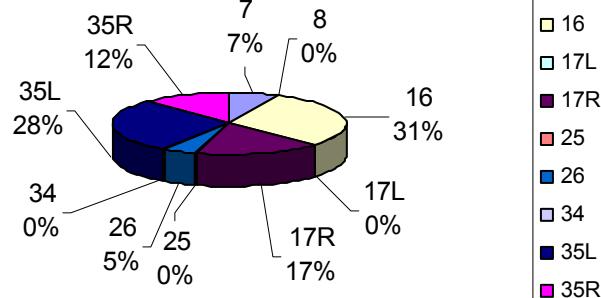
### Top 10 Complainants vs. All Others



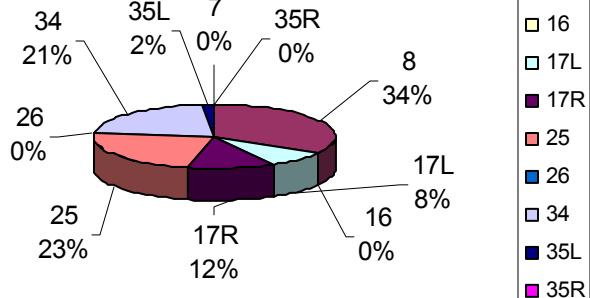
## 2001 Annual - Runway Utilization



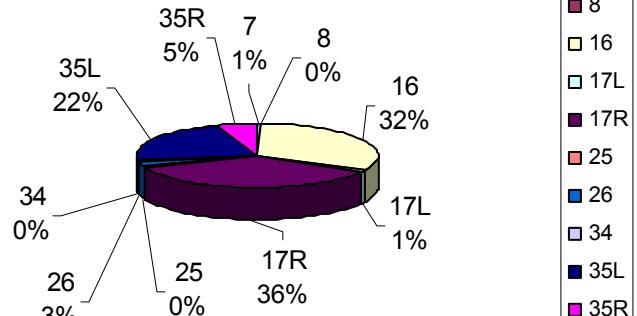
**Day Arrivals (700am - 959pm)**



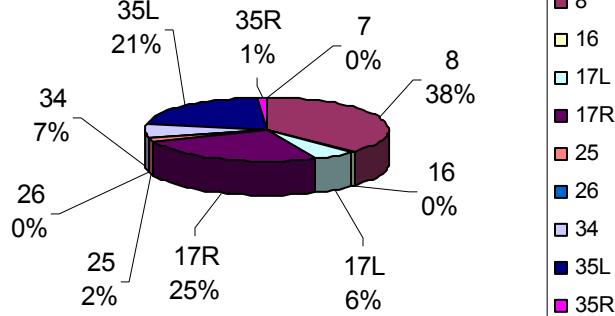
**Day Departures (700am - 959pm)**



**Night Arrivals (1000pm - 659am)**



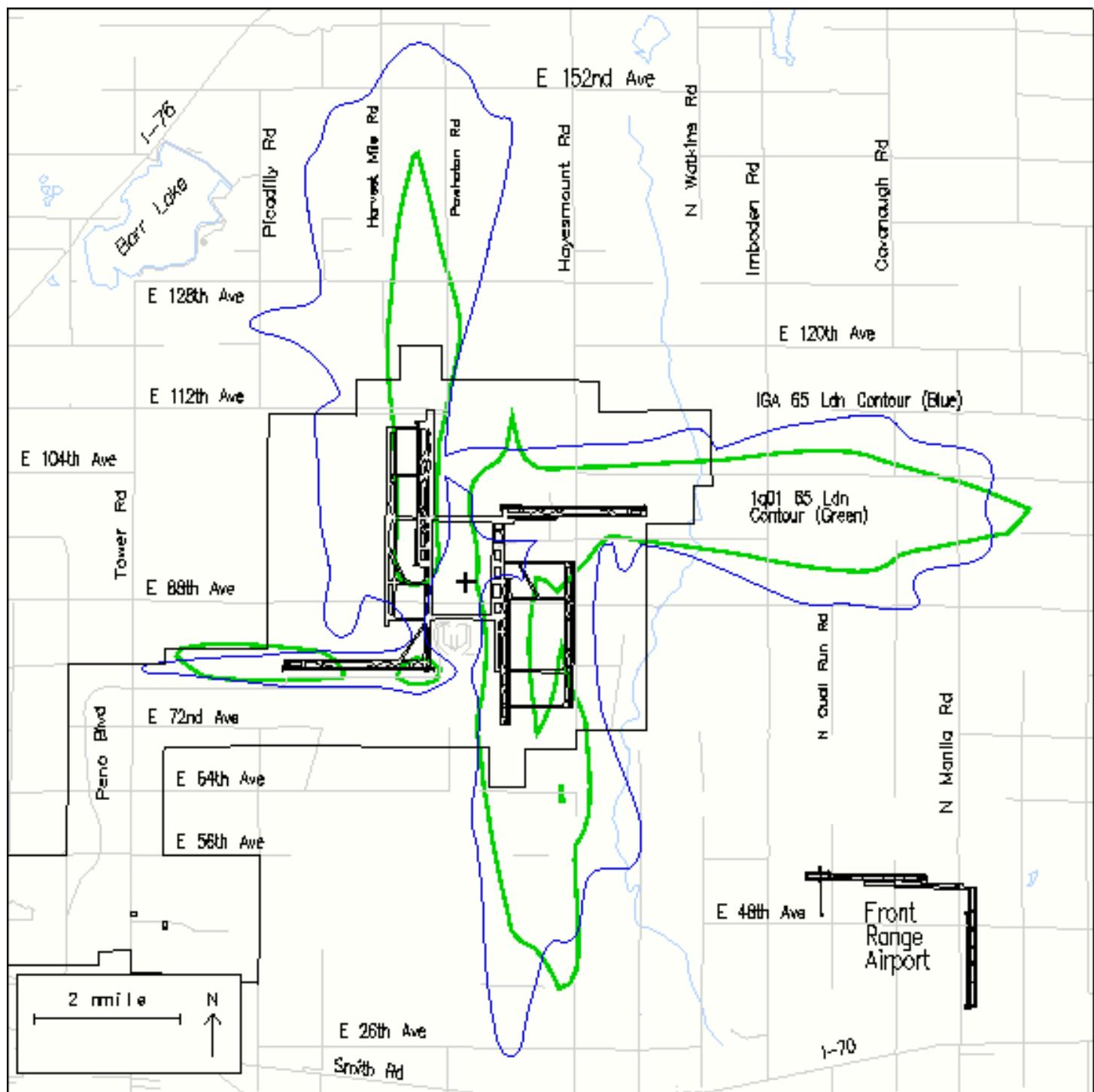
**Night Departures (1000pm - 659am)**



## **First Quarter 2001**

**March 1, 2001 – May 31, 2001**

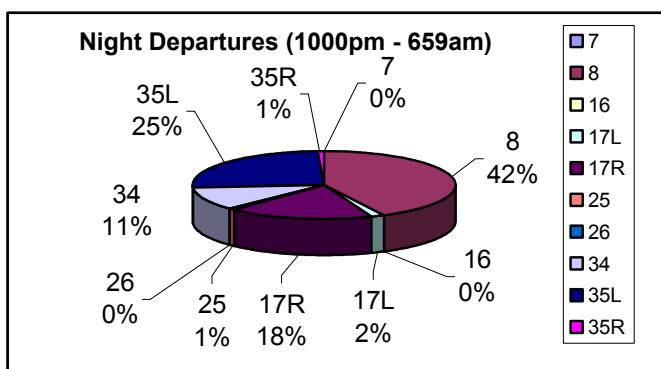
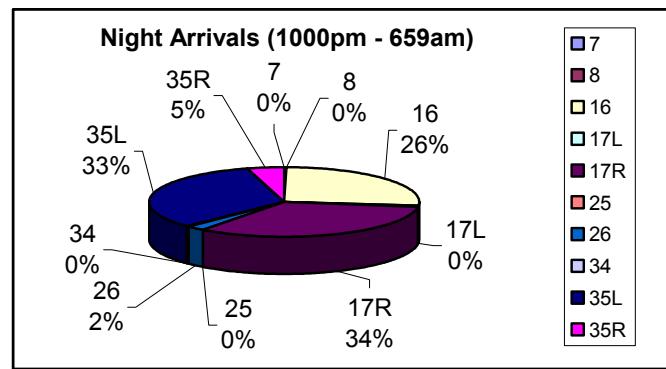
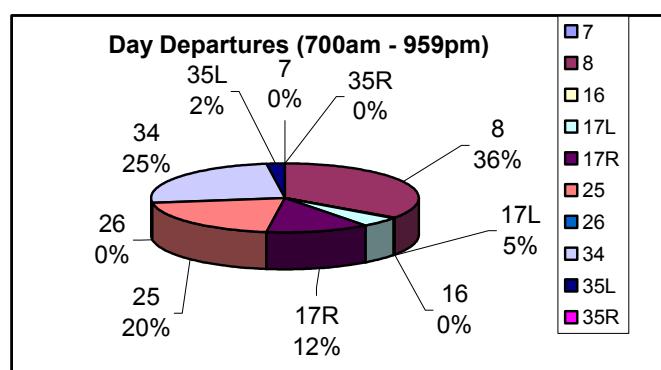
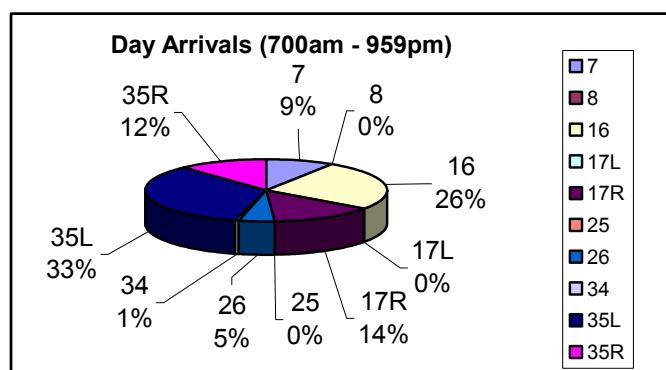
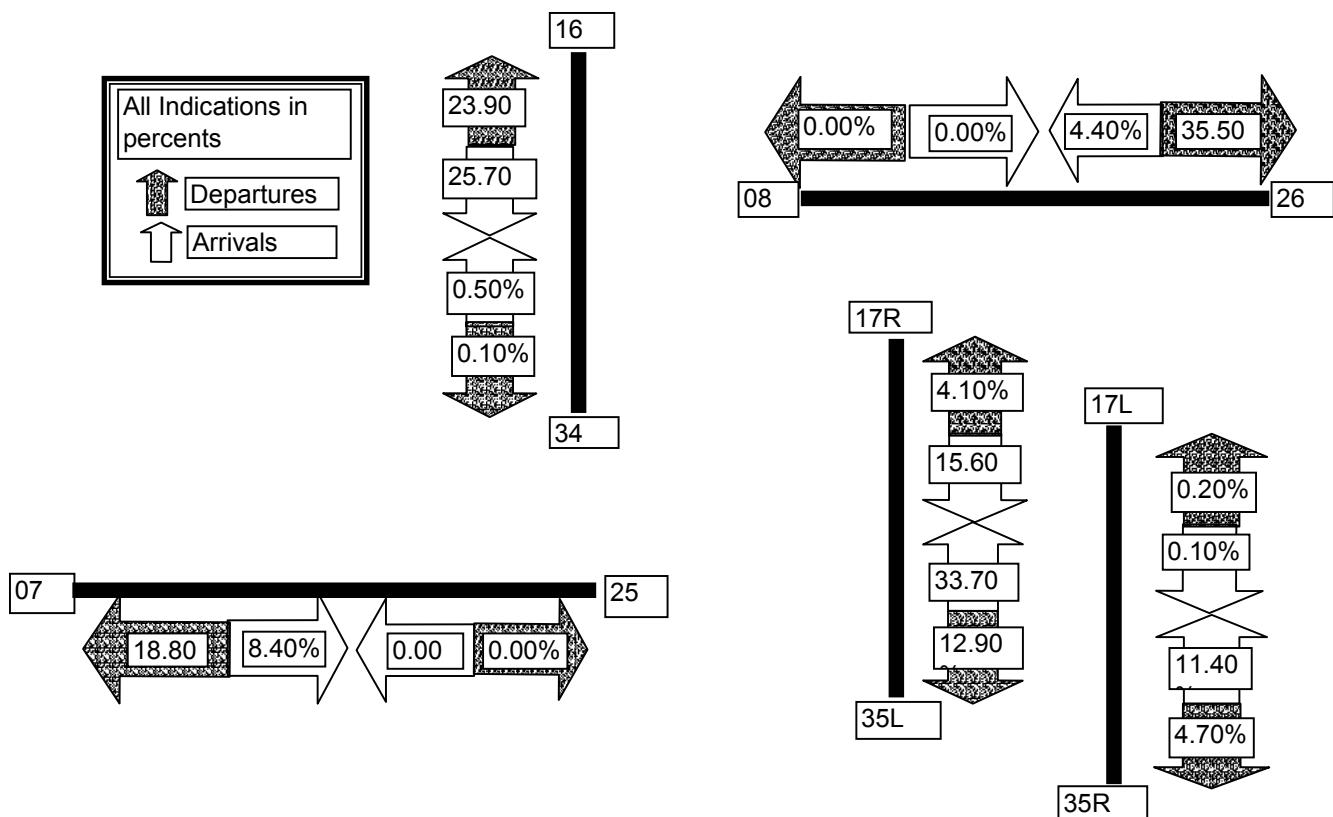
**First Quarter 2001 - 65 Ldn Contour**



**First Quarter 2001 – Denver/Adams County IGA NEPS Values**

Area 2				Area 1			
		1q01				1q01	
Grid	IGA Annual	Calculated	Difference	Grid	IGA Annual	Calculated	Difference
Points	Leq (24)	Leq (24)	Leq	Points	Leq (24)	Leq (24)	Leq
A,1	38.6	37.8	-0.8	C,4	44.2	40.2	-4.0
A,2	37.6	38.5	0.9	C,5	36.7	37.6	0.9
A,3	42.3	39.3	-3.0	C,6	36.0	36.0	0.0
A,4	45.3	40.4	-5.0	D,4	41.1	38.0	-3.1
A,5	43.9	41.4	-2.5	D,5	34.2	36.0	1.8
A,6	37.5	41.5	4.0	D,6	36.0	35.3	-0.7
A,7	37.7	41.9	4.2	D,7	41.4	36.6	-4.8
A,8	36.5	40.5	4.0	E,4	38.3	38.4	0.1
A,9	36.3	38.4	2.1	E,5	34.8	38.8	4.0
A,10	37.6	37.9	0.3	E,6	36.7	36.6	-0.1
A,11	39.2	37.6	-1.6	E,7	41.4	36.2	-5.2
A,12	41.2	37.1	-4.1	F,2	51.7	46.1	-5.6
B,2	39.5	39.2	-0.3	F,3	43.7	42.5	-1.2
B,4	42.5	40.9	-1.6	F,5	37.3	37.6	0.3
B,5	43.1	42.2	-0.9	F,6	38.5	37.7	-0.8
B,6	39.0	42.3	3.3	F,7	42.1	37.8	-4.3
B,7	39.0	42.6	3.6	G,2	51.2	48.0	-3.2
B,8	38.0	40.6	2.6	G,3	42.1	43.6	1.5
B,9	38.3	38.9	0.6	G,4	40.2	40.2	0.0
B,10	39.0	39.0	0.0	H,2	50.1	49.1	-1.0
B,11	40.4	38.9	-1.5	H,3	46.0	44.5	-1.5
B,12	42.6	38.4	-4.2	H,4	46.1	40.3	-5.8
C,2	41.0	40.2	-0.9	Area 3			
C,3	43.3	41.0	-2.3	1q01			
C,4	43.5	41.6	-1.9	Grid	IGA Annual	Calculated	Difference
C,5	43.4	43.1	-0.3	Points	Leq (24)	Leq (24)	Leq
C,6	43.3	43.3	0.0	A,-1	38.9	35.3	-3.6
C,7	43.3	43.1	-0.2	A,0	39.6	35.6	-4.0
C,8	42.6	40.9	-1.8	A,1	43.2	36.0	-7.2
C,9	42.2	39.9	-2.3	A,2	45.7	36.9	-8.8
C,10	41.6	40.5	-1.1	A,3	45.6	38.0	-7.6
C,11	42.5	40.4	-2.1	B,-1	37.9	34.7	-3.2
C,12	44.3	39.7	-4.7	B,0	39.2	34.8	-4.4
D,2	41.7	41.0	-0.7	B,1	42.6	35.2	-7.5
D,3	46.2	42.0	-4.2	B,2	45.8	35.9	-9.9
D,4	48.4	42.6	-5.8	B,3	45.7	37.4	-8.3
D,5	48.2	44.3	-3.9	C,-1	36.7	34.9	-1.8
D,6	46.2	44.4	-1.8	C,0	37.1	35.1	-2.0
D,7	44.2	43.7	-0.5	C,1	39.5	35.5	-4.0
D,8	43.7	41.4	-2.4	C,2	44.8	36.0	-8.8
D,9	43.1	41.8	-1.3	C,3	46.5	37.7	-8.8
D,10	44.9	42.1	-2.8	D,-1	32.6	35.6	3.0
D,11	44.5	41.3	-3.2	D,0	33.3	35.5	2.2
D,12	45.1	40.3	-4.8	D,1	37.3	35.9	-1.4
E,1	42.4	40.8	-1.6	D,2	43.0	36.4	-6.6
E,2	42.2	41.9	-0.3	E,-1	31.4	35.9	4.5
E,3	46.7	43.3	-3.4	E,0	33.1	35.6	2.5
E,4	51.2	43.9	-7.3	E,1	36.2	35.7	-0.5
E,5	51.0	45.7	-5.3	E,2	40.6	36.3	-4.3
E,6	44.6	45.6	1.0	F,1	36.5	35.4	-1.1
E,9	43.1	43.3	0.2	F,2	39.4	36.6	-2.8
E,10	43.1	42.1	-1.0	G,1	42.5	36.0	-6.6
E,11	46.1	41.4	-4.7				

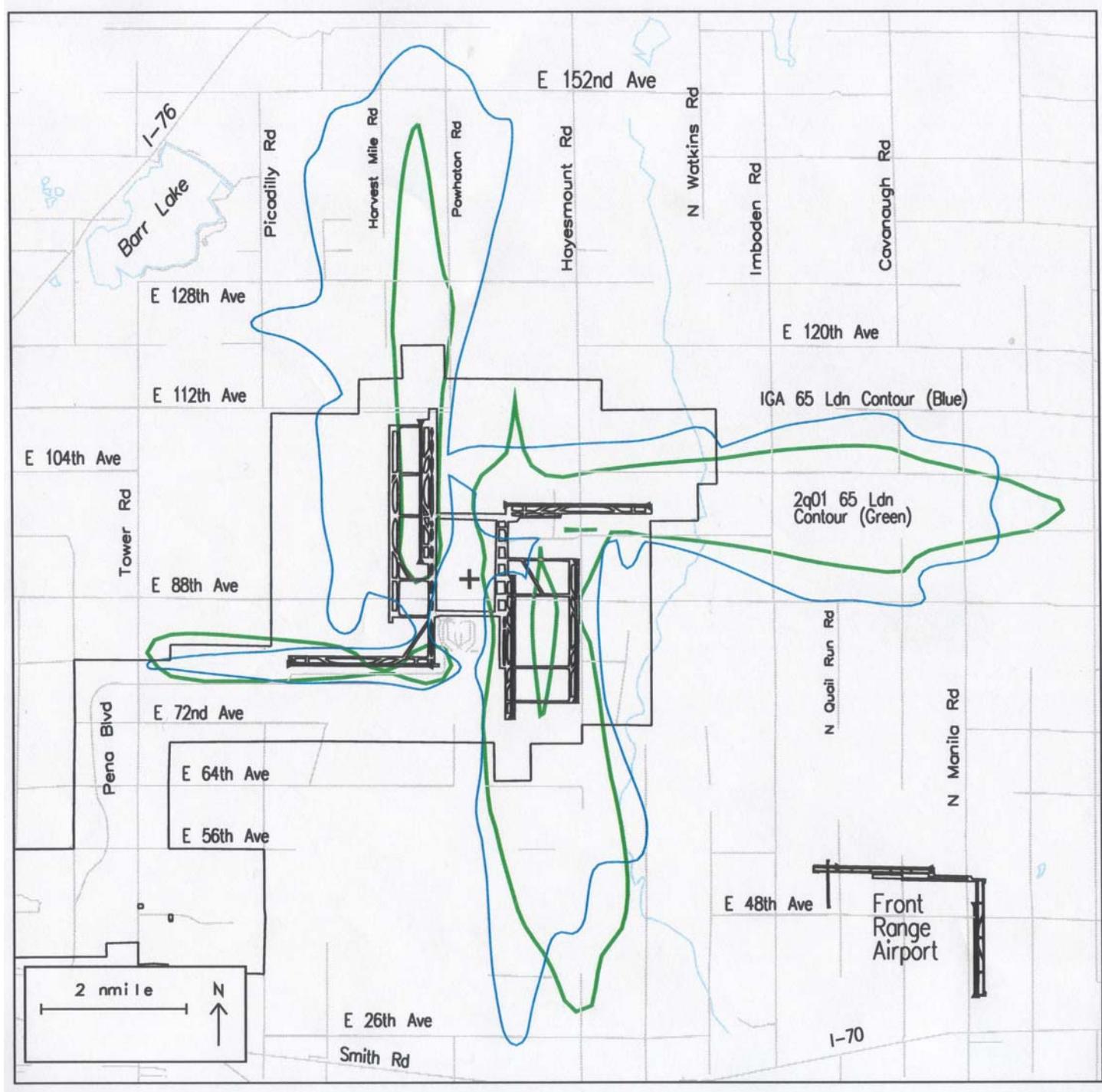
## First Quarter 2001 – Runway Utilization



**Second Quarter, 2001**

**June 1, 2001 – August 31, 2001**

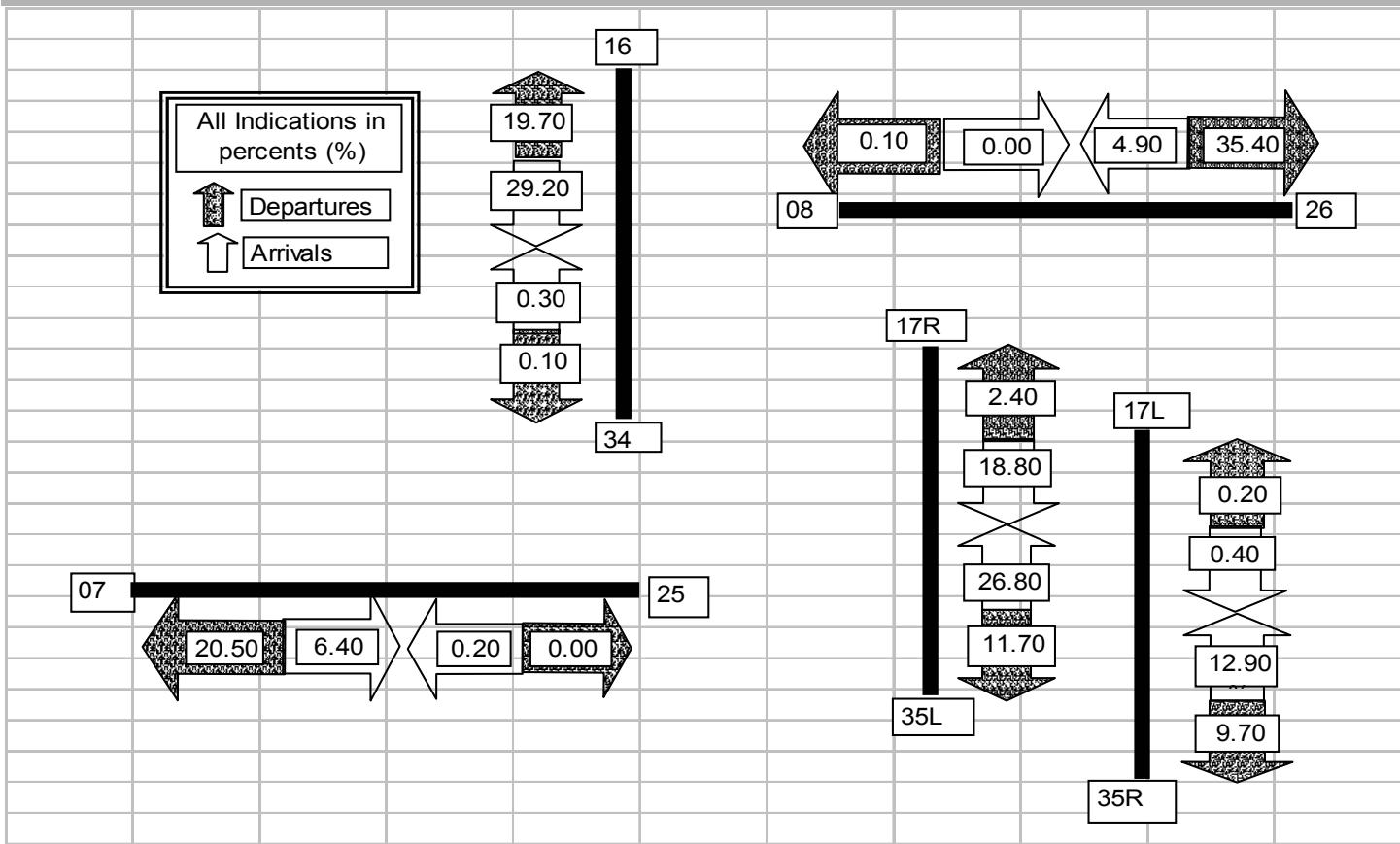
**Second Quarter 2001 – 65 Ldn Contour**



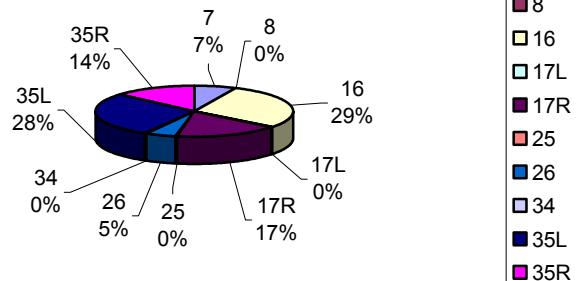
**Second Quarter 2001 – Denver/Adams County IGA NEPS Values**

Area 2 2q01				Area 1 2q01			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq	Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,1	38.6	38.7	0.1	C,4	44.2	40.7	-3.5
A,2	37.6	39.4	1.8	C,5	36.7	38.5	1.8
A,3	42.3	40.3	-2.0	C,6	36.0	37.1	1.1
A,4	45.3	40.9	-4.4	D,4	41.1	39.2	-1.9
A,5	43.9	42.0	-1.9	D,5	34.2	37.6	3.4
A,6	37.5	42.2	4.7	D,6	36.0	37.2	1.2
A,7	37.7	42.3	4.6	D,7	41.4	37.6	-3.8
A,8	36.5	41.2	4.7	E,4	38.3	39.9	1.6
A,9	36.3	38.9	2.6	E,5	34.8	39.4	4.6
A,10	37.6	38.7	1.1	E,6	36.7	37.9	1.2
A,11	39.2	38.8	-0.4	E,7	41.4	37.8	-3.6
A,12	41.2	38.5	-2.8	F,2	51.7	46.6	-5.2
B,2	39.5	40.1	0.6	F,3	43.7	43.6	-0.1
B,4	42.5	41.7	-0.8	F,5	37.3	39.9	2.6
B,5	43.1	43.0	-0.1	F,6	38.5	39.3	0.8
B,6	39.0	43.1	4.1	F,7	42.1	39.3	-2.9
B,7	39.0	43.1	4.1	G,2	51.2	48.4	-2.8
B,8	38.0	41.3	3.3	G,3	42.1	44.6	2.5
B,9	38.3	39.7	1.4	G,4	40.2	41.8	1.6
B,10	39.0	40.3	1.3	H,2	50.1	50.0	-0.1
B,11	40.4	40.2	-0.3	H,3	46.0	45.7	-0.4
B,12	42.6	39.7	-2.9	H,4	46.1	42.3	-3.8
C,2	41.0	41.4	0.4	Area 3 2q01			
C,3	43.3	42.3	-1.0	Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
C,4	43.5	42.7	-0.8	A,-1	38.9	35.5	-3.4
C,5	43.4	43.8	0.4	A,0	39.6	35.7	-3.9
C,6	43.3	44.1	0.8	A,1	43.2	36.1	-7.1
C,7	43.3	44.0	0.7	A,2	45.7	36.9	-8.8
C,8	42.6	42.0	-0.6	A,3	45.6	37.8	-7.8
C,9	42.2	41.5	-0.7	B,-1	37.9	35.6	-2.3
C,10	41.6	41.9	0.3	B,0	39.2	36.0	-3.2
C,11	42.5	41.7	-0.8	B,1	42.6	36.5	-6.1
C,12	44.3	41.3	-3.0	B,2	45.8	36.9	-8.9
D,2	41.7	42.7	1.0	B,3	45.7	37.8	-7.9
D,3	46.2	43.7	-2.5	C,-1	36.7	36.0	-0.7
D,4	48.4	43.7	-4.7	C,0	37.1	36.0	-1.1
D,5	48.2	45.0	-3.2	C,1	39.5	36.1	-3.4
D,6	46.2	45.4	-0.9	C,2	44.8	36.6	-8.2
D,7	44.2	45.0	0.8	C,3	46.5	37.2	-9.3
D,8	43.7	42.8	-0.9	D,-1	32.6	36.4	3.8
D,9	43.1	43.4	0.3	D,0	33.3	36.3	3.0
D,10	44.9	43.5	-1.4	D,1	37.3	36.2	-1.1
D,11	44.5	42.9	-1.6	D,2	43.0	36.8	-6.2
D,12	45.1	42.2	-2.9	E,-1	31.4	37.1	5.7
E,1	42.4	42.1	-0.3	E,0	33.1	37.1	4.0
E,2	42.2	43.5	1.3	E,1	36.2	37.0	0.8
E,3	46.7	45.1	-1.6	E,2	40.6	37.6	-3.0
E,4	51.2	45.2	-6.1	F,1	36.5	38.3	1.8
E,5	51.0	46.2	-4.8	F,2	39.4	39.3	-0.1
E,6	44.6	46.7	2.1	G,1	42.5	38.3	-4.2
E,9	43.1	45.7	2.6				
E,10	43.1	44.5	1.4				
E,11	46.1	43.2	-2.9				

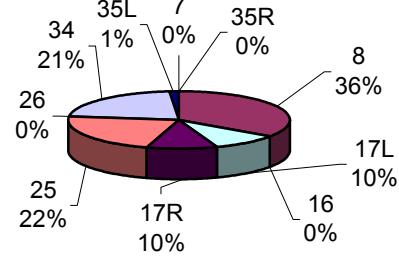
## Second Quarter 2001 – Runway Utilization



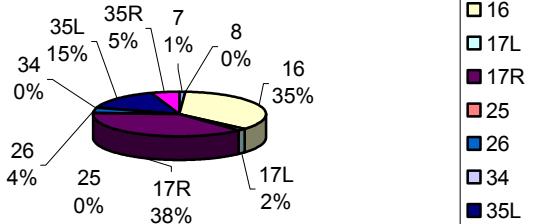
**Day Arrivals (700am - 959pm)**



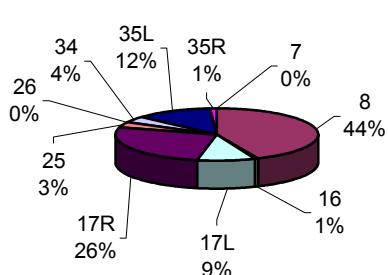
**Day Departures (700am - 959pm)**



**Night Arrivals (1000pm - 659am)**



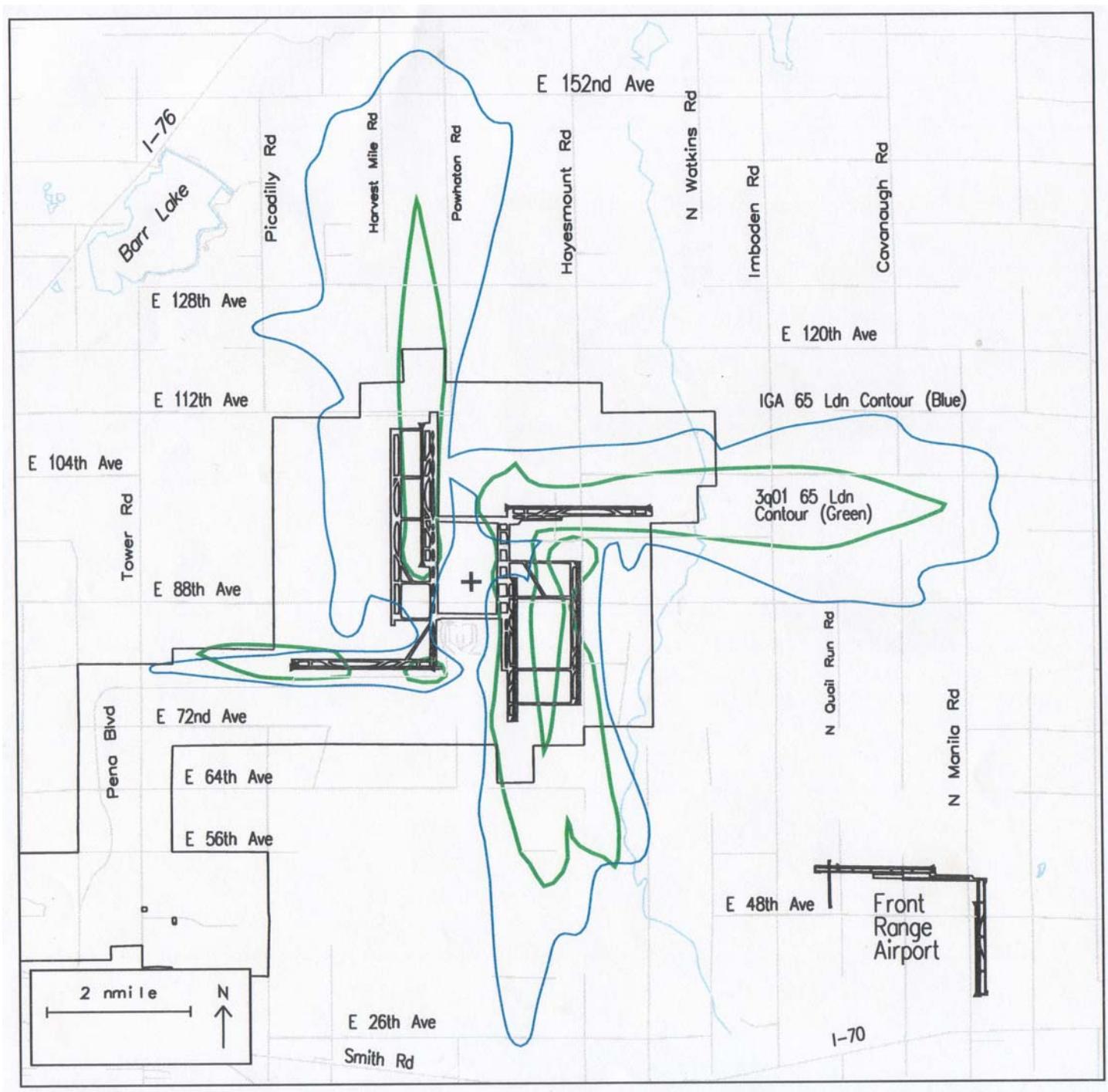
**Night Departures (1000pm - 659am)**



**Third Quarter, 2001**

**September 1, 2001 – November 30, 2001**

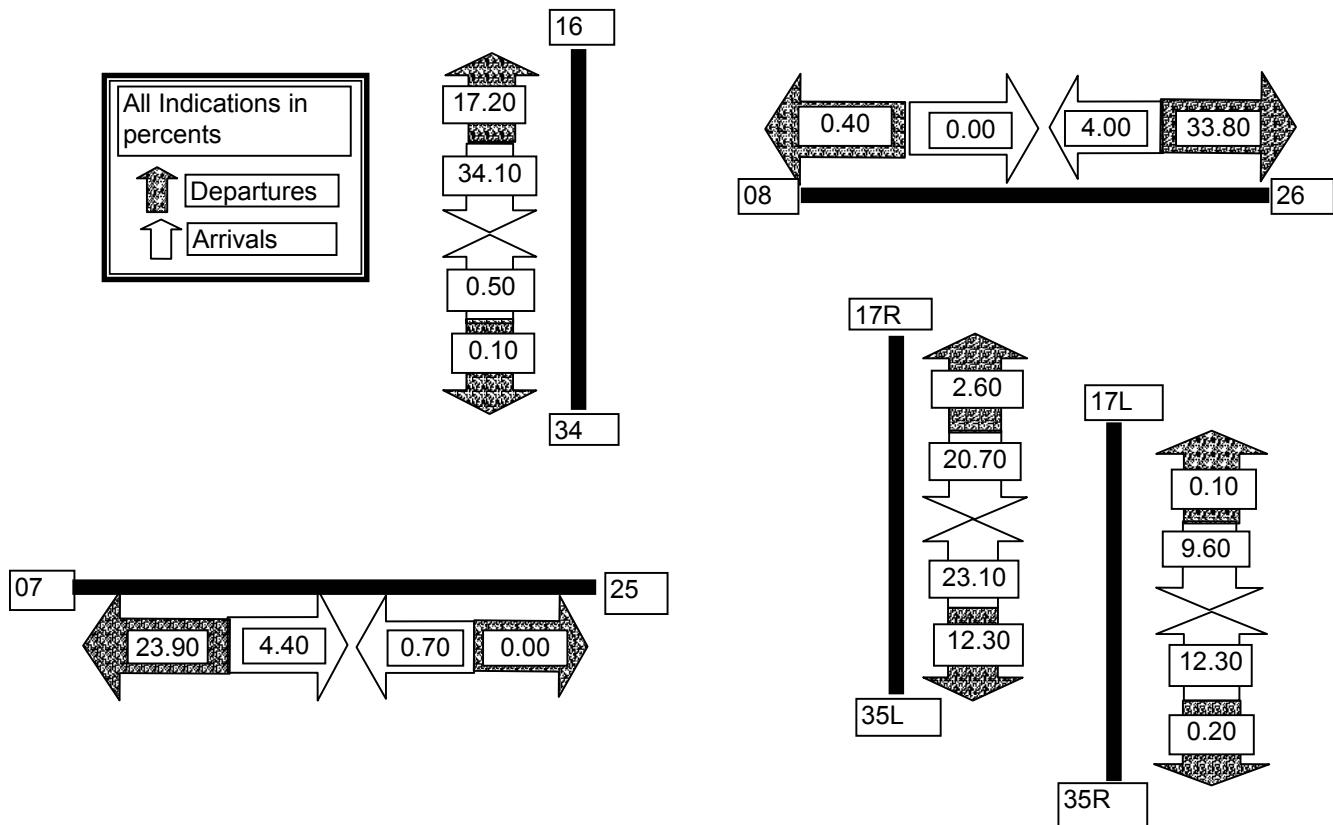
**Third Quarter 2001 – 65 Ldn Contour**



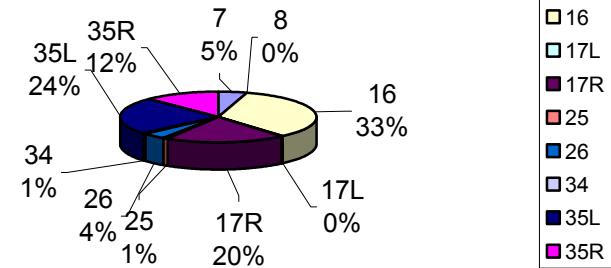
### Third Quarter 2001 – Denver/Adams County IGA NEPS Values

Area 2				Area 1			
		3q01				3q01	
Grid	IGA Annual	Calculated	Difference	Grid	IGA Annual	Calculated	Difference
Points	Leq (24)	Leq (24)	Leq	Points	Leq (24)	Leq (24)	Leq
A,1	38.6	37.1	-1.6	C,4	44.2	38.5	-5.7
A,2	37.6	37.6	0.0	C,5	36.7	36.2	-0.5
A,3	42.3	38.3	-4.0	C,6	36.0	34.9	-1.1
A,4	45.3	39.1	-6.2	D,4	41.1	37.0	-4.2
A,5	43.9	40.2	-3.8	D,5	34.2	35.2	1.0
A,6	37.5	40.4	2.9	D,6	36.0	34.5	-1.6
A,7	37.7	40.7	3.0	D,7	41.4	34.9	-6.5
A,8	36.5	39.5	3.0	E,4	38.3	37.4	-0.9
A,9	36.3	37.2	0.9	E,5	34.8	37.2	2.4
A,10	37.6	36.0	-1.6	E,6	36.7	35.6	-1.1
A,11	39.2	35.6	-3.6	E,7	41.4	35.2	-6.2
A,12	41.2	35.0	-6.2	F,2	51.7	42.7	-9.0
B,2	39.5	38.1	-1.4	F,3	43.7	39.4	-4.3
B,4	42.5	39.7	-2.8	F,5	37.3	37.2	-0.1
B,5	43.1	40.9	-2.2	F,6	38.5	37.1	-1.4
B,6	39.0	41.2	2.2	F,7	42.1	37.3	-4.8
B,7	39.0	41.4	2.4	G,2	51.2	44.5	-6.7
B,8	38.0	39.6	1.6	G,3	42.1	40.2	-1.9
B,9	38.3	37.6	-0.7	G,4	40.2	39.5	-0.7
B,10	39.0	37.1	-1.9	H,2	50.1	46.3	-3.8
B,11	40.4	37.0	-3.5	H,3	46.0	41.3	-4.7
B,12	42.6	36.5	-6.1	H,4	46.1	38.7	-7.4
C,2	41.0	38.9	-2.1	Area 3			
C,3	43.3	39.5	-3.8	3q01			
C,4	43.5	40.5	-3.0	Grid	IGA Annual	Calculated	Difference
C,5	43.4	41.8	-1.6	Points	Leq (24)	Leq (24)	Leq
C,6	43.3	42.0	-1.3	A,-1	38.9	31.9	-7.0
C,7	43.3	42.1	-1.3	A,0	39.6	32.3	-7.3
C,8	42.6	39.7	-2.9	A,1	43.2	33.9	-9.3
C,9	42.2	38.6	-3.6	A,2	45.7	36.0	-9.8
C,10	41.6	38.9	-2.7	A,3	45.6	37.6	-8.0
C,11	42.5	38.5	-4.0	B,-1	37.9	31.7	-6.2
C,12	44.3	37.8	-6.5	B,0	39.2	31.9	-7.3
D,2	41.7	39.7	-2.0	B,1	42.6	33.3	-9.3
D,3	46.2	40.4	-5.8	B,2	45.8	35.7	-10.1
D,4	48.4	41.1	-7.3	B,3	45.7	37.7	-8.0
D,5	48.2	42.8	-5.4	C,-1	36.7	32.2	-4.5
D,6	46.2	43.0	-3.2	C,0	37.1	32.4	-4.7
D,7	44.2	42.8	-1.5	C,1	39.5	33.5	-6.0
D,8	43.7	40.2	-3.5	C,2	44.8	35.8	-9.0
D,9	43.1	40.5	-2.6	C,3	46.5	38.1	-8.5
D,10	44.9	40.6	-4.3	D,-1	32.6	33.3	0.6
D,11	44.5	39.7	-4.8	D,0	33.3	33.5	0.2
D,12	45.1	38.8	-6.3	D,1	37.3	34.2	-3.1
E,1	42.4	39.4	-3.1	D,2	43.0	36.2	-6.8
E,2	42.2	40.1	-2.1	E,-1	31.4	34.0	2.6
E,3	46.7	41.3	-5.4	E,0	33.1	34.2	1.1
E,4	51.2	42.0	-9.2	E,1	36.2	34.5	-1.7
E,5	51.0	43.9	-7.1	E,2	40.6	36.2	-4.4
E,6	44.6	44.2	-0.4	F,1	36.5	34.3	-2.2
E,9	43.1	42.5	-0.6	F,2	39.4	36.2	-3.2
E,10	43.1	41.4	-1.8	G,1	42.5	35.2	-7.3
E,11	46.1	40.0	-6.1				

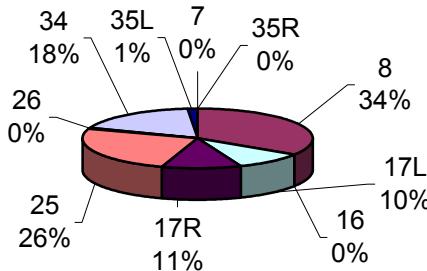
### Third Quarter 2001 – Runway Utilization



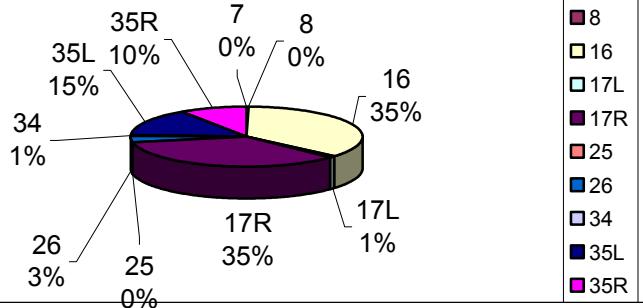
**Day Arrivals (700am - 959pm)**



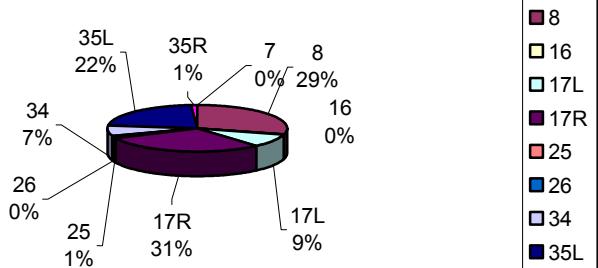
**Day Departures (700am - 959pm)**



**Night Arrivals (1000pm - 659am)**



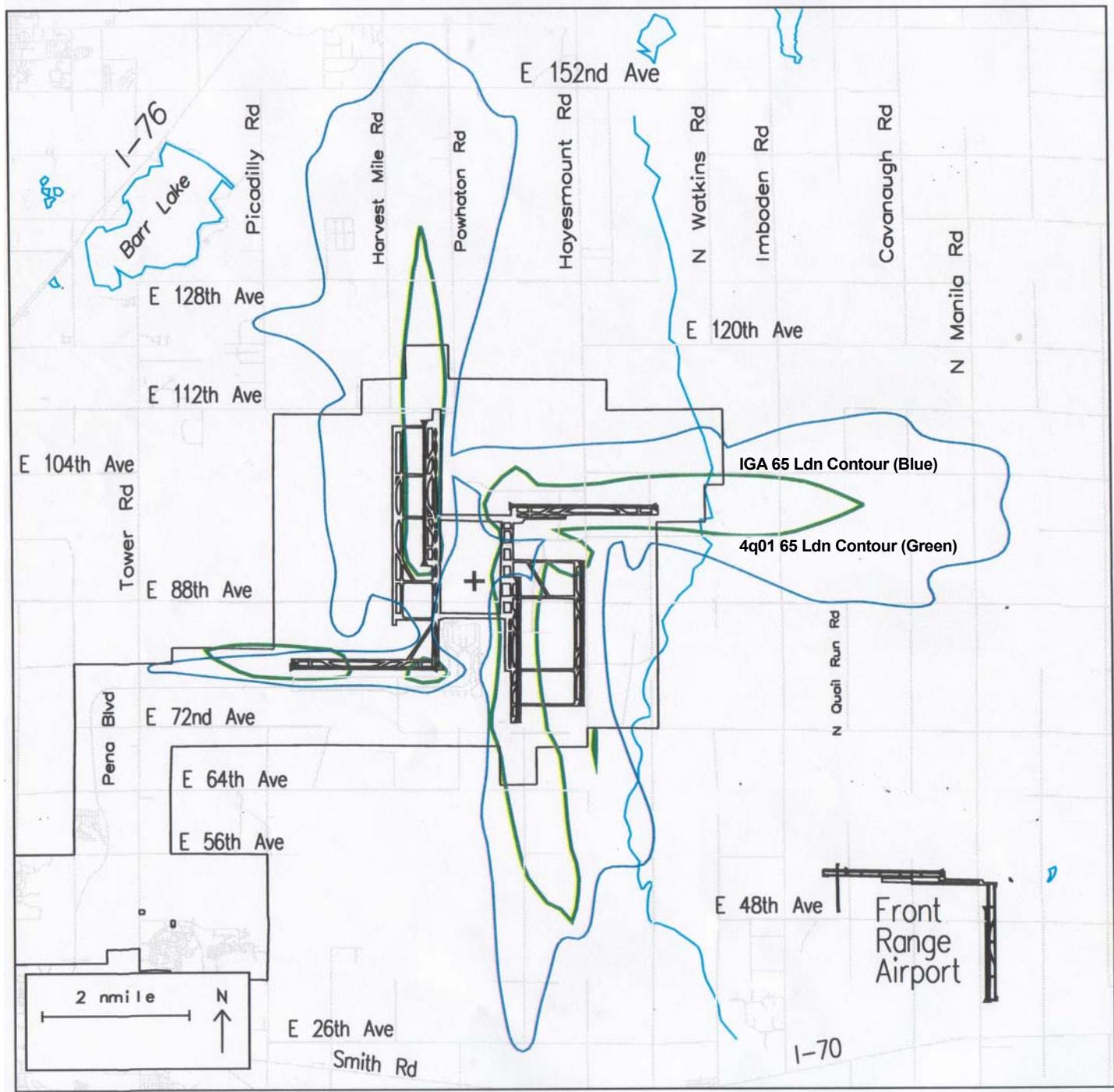
**Night Departures (1000pm - 659am)**



## **Fourth Quarter, 2001**

**December 1, 2001 – February 28, 2002**

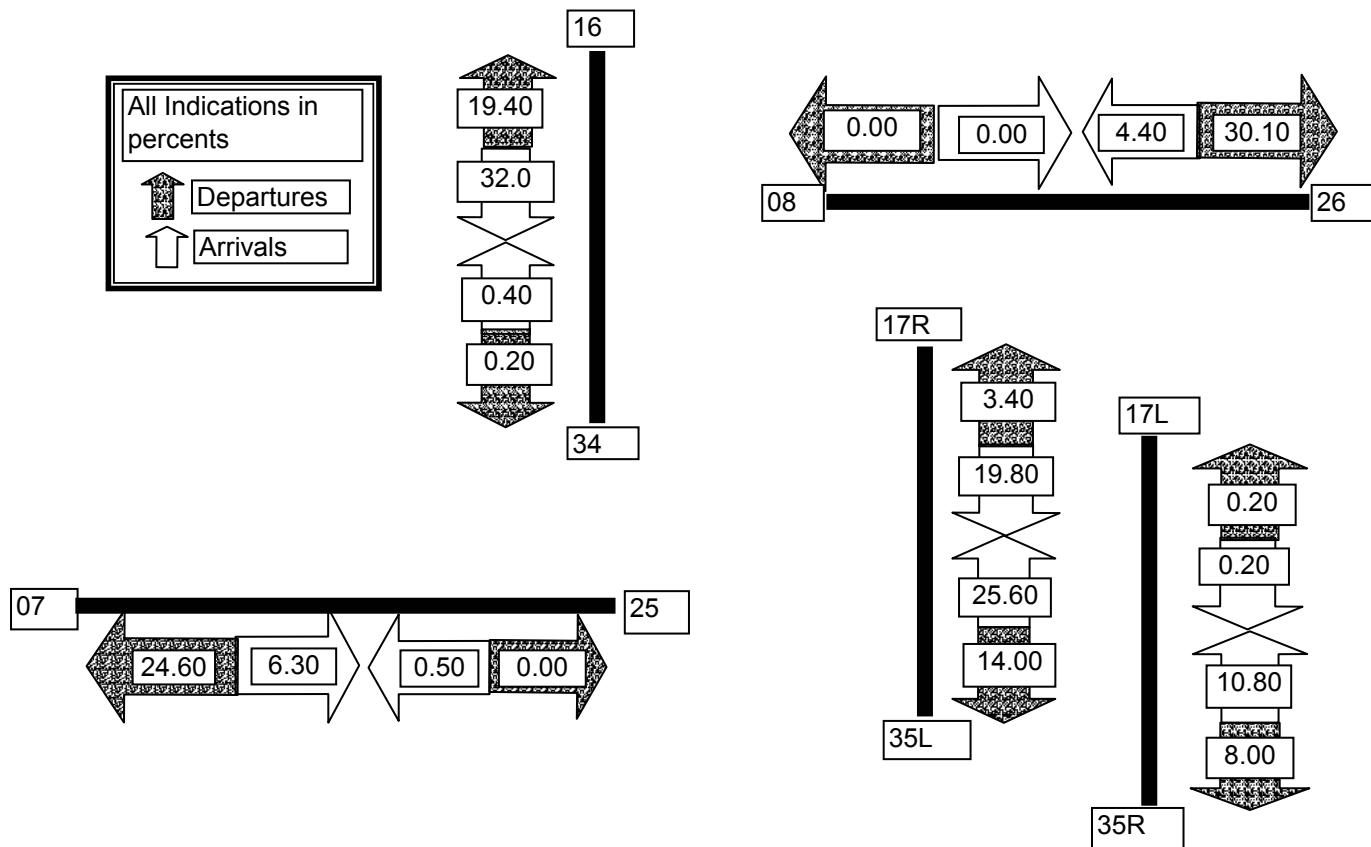
**Fourth Quarter 2001 - 65 Ldn Contour**



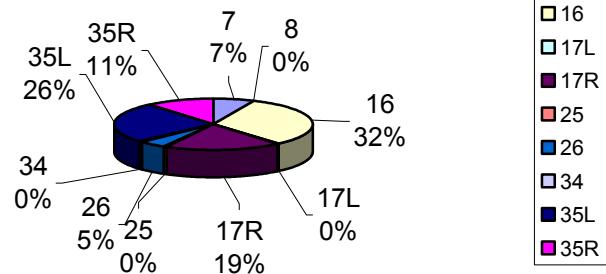
**Fourth Quarter 2001 - Denver/Adams County IGA NEPS Values**

Area 2				Area 1			
		4q01				4q01	
Grid	IGA Annual	Calculated	Difference	Grid	IGA Annual	Calculated	Difference
Points	Leq (24)	Leq (24)	Leq	Points	Leq (24)	Leq (24)	Leq
A,1	38.6	36.6	-2.0	C,4	44.2	37.0	-7.2
A,2	37.6	37.1	-0.5	C,5	36.7	34.8	-1.9
A,3	42.3	37.9	-4.4	C,6	36.0	33.6	-2.4
A,4	45.3	38.9	-6.4	D,4	41.1	35.4	-5.7
A,5	43.9	40.0	-3.9	D,5	34.2	33.9	-0.3
A,6	37.5	40.1	2.6	D,6	36.0	33.5	-2.6
A,7	37.7	40.2	2.5	D,7	41.4	34.6	-6.8
A,8	36.5	39.2	2.7	E,4	38.3	35.9	-2.4
A,9	36.3	36.8	0.5	E,5	34.8	36.0	1.2
A,10	37.6	35.2	-2.4	E,6	36.7	34.7	-2.0
A,11	39.2	34.7	-4.5	E,7	41.4	34.4	-7.0
A,12	41.2	34.2	-7.0	F,2	51.7	40.7	-11.0
B,2	39.5	37.7	-1.8	F,3	43.7	38.4	-5.3
B,4	42.5	39.5	-3.1	F,5	37.3	36.3	-1.0
B,5	43.1	40.8	-2.3	F,6	38.5	36.4	-2.1
B,6	39.0	40.9	1.9	F,7	42.1	36.4	-5.7
B,7	39.0	41.0	2.0	G,2	51.2	42.2	-9.0
B,8	38.0	39.5	1.5	G,3	42.1	38.9	-3.3
B,9	38.3	37.2	-1.1	G,4	40.2	37.1	-3.1
B,10	39.0	36.1	-2.9	H,2	50.1	44.1	-6.0
B,11	40.4	35.9	-4.5	H,3	46.0	39.4	-6.6
B,12	42.6	35.4	-7.2	H,4	46.1	37.5	-8.6
C,2	41.0	38.3	-2.7	Area 3			
C,3	43.3	39.1	-4.2	4q01			
C,4	43.5	40.1	-3.4	Grid	IGA Annual	Calculated	Difference
C,5	43.4	41.7	-1.7	Points	Leq (24)	Leq (24)	Leq
C,6	43.3	41.7	-1.6	A,-1	38.9	33.1	-5.8
C,7	43.3	41.7	-1.6	A,0	39.6	33.6	-6.0
C,8	42.6	39.7	-2.9	A,1	43.2	34.8	-8.4
C,9	42.2	37.9	-4.3	A,2	45.7	36.6	-9.2
C,10	41.6	37.5	-4.2	A,3	45.6	37.6	-8.0
C,11	42.5	37.3	-5.2	B,-1	37.9	32.7	-5.2
C,12	44.3	36.7	-7.6	B,0	39.2	33.2	-6.0
D,2	41.7	39.0	-2.7	B,1	42.6	34.4	-8.2
D,3	46.2	39.9	-6.3	B,2	45.8	36.3	-9.5
D,4	48.4	40.9	-7.5	B,3	45.7	37.6	-8.1
D,5	48.2	42.7	-5.5	C,-1	36.7	33.3	-3.4
D,6	46.2	42.6	-3.6	C,0	37.1	33.6	-3.5
D,7	44.2	42.4	-1.8	C,1	39.5	34.4	-5.1
D,8	43.7	40.1	-3.7	C,2	44.8	36.2	-8.6
D,9	43.1	39.1	-4.0	C,3	46.5	37.7	-8.8
D,10	44.9	39.1	-5.8	D,-1	32.6	33.7	1.1
D,11	44.5	38.7	-5.8	D,0	33.3	33.8	0.5
D,12	45.1	37.9	-7.2	D,1	37.3	34.7	-2.6
E,1	42.4	39.0	-3.4	D,2	43.0	36.3	-6.7
E,2	42.2	39.6	-2.6	E,-1	31.4	34.2	2.8
E,3	46.7	40.7	-6.0	E,0	33.1	34.3	1.2
E,4	51.2	41.8	-9.4	E,1	36.2	35.3	-0.9
E,5	51.0	44.0	-7.0	E,2	40.6	37.1	-3.6
E,6	44.6	43.7	-0.9	F,1	36.5	36.9	0.4
E,9	43.1	40.7	-2.4	F,2	39.4	37.8	-1.6
E,10	43.1	40.0	-3.1	G,1	42.5	38.6	-3.9
E,11	46.1	39.0	-7.1				

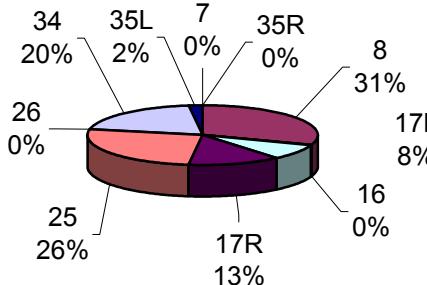
## Fourth Quarter 2001 - Runway Utilization



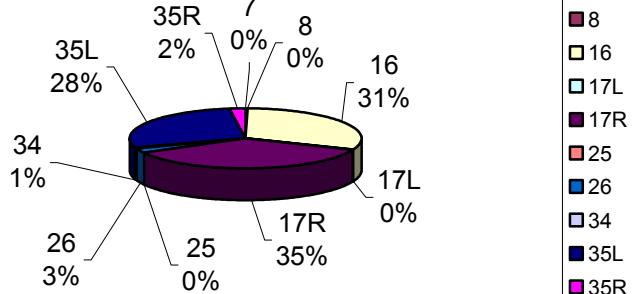
**Day Arrivals (700am - 959pm)**



**Day Departures (700am - 959pm)**



**Night Arrivals (1000pm - 659am)**



**Night Departures (1000pm - 659am)**

