



DEN 2003 Annual Noise Report

2003 Annual Results

Class II exceedances during the 2003 reporting period decreased as compared to 2002, continuing a multi-year trend. There were three (3) NEPS grid points at which the limits were exceeded by more than 2.0 dB (the definition of a potential Class II violation) in 2003. This compares to five (5) Class II exceedances during 2002. Two of the exceedances were located in Area 2 and one in Area 3.

The 65 L_{dn} contour decreased in overall size as compared to 2002. The 2003 contour is also completely contained within the boundary of the airport or within the boundary of the City and County of Denver.

Noise complaints for 2003 decreased by 45.6% as compared to 2002. The total number of complaints registered in 2003 was 4,394, while the total for 2002 was 8,082. The number of households registering at least one complaint during the year also decreased, dropping from 215 in 2002 to 191 in 2003. The ten households which registered the highest numbers of complaints per household accounted for a combined 70% of all complaints received.

DEN 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 on page 3 for NEPS locations).

The DEN ANOMS system monitors noise levels at 28 permanent and 4 portable noise monitoring terminals. These terminals are located throughout the Denver metro area (see map on page 3 for RMT locations).

The system also records the movement of all aircraft in the vicinity of DEN 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.

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 our office receives from the FAA ARTS system which is sent 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 DEN Noise Abatement Office to perform noise data analysis, generate daily automated noise contours, receive detailed runway utilization, and airline fleet mix identification.

Land Use/Zoning



Growth and development in the areas surrounding DEN 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 L_{dn} (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. This noise contour is used at DEN for land use and planning by the surrounding jurisdictions.

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**DEN Noise
Hotline Policy**



The purpose of the DEN Noise Complaint Hotline is to provide an opportunity for individuals to express their concerns regarding noise generated by aircraft operating at DEN. Citizens are asked to leave their name, address and the date and time of their complaint on the hotline. Complaints are downloaded daily by our Noise Analysts and 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. We have five methods for registering complaints; they include calling the Hotline at (303) 342-2380, or toll free 1-800-417-2988, they may be faxed to (303) 342-2366, or sent to our email address noise.office@diadenver.net, or by using our new online form on our website <http://www.flydenver.com/biz/noise/index.asp> just click on the *Complaint* tab to get to the online form.

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 (Leq): 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 Leq (24) for an average of the sound level over a 24-hour period).

Day Night Level (Ldn): Also referred to as DNL. Similar to a Leq measurement, but is conducted over at least a 24-hour time span and includes a 10dB nighttime penalty. For an Ldn 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 Ldn level. These contour lines are nested in such a way that contours closer to the airport generally surround areas that experience higher noise levels than contours farther out. Annual Ldn contours are used to determine whether certain types of zoning or land uses are compatible with particular annual Ldn noise levels. 65 Ldn 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.



DEN Noise Abatement Office Computer Room

Phone: (303) 342-2000

Fax: (303) 342-2366

Email: Noise.office@diadenver.net

Website: www.flydenver.com
Search for "Noise"

Mailing Address:

Denver International Airport
Noise Office
8500 Peña Boulevard
Airport Office Building, 6th Floor
Denver, CO 80249

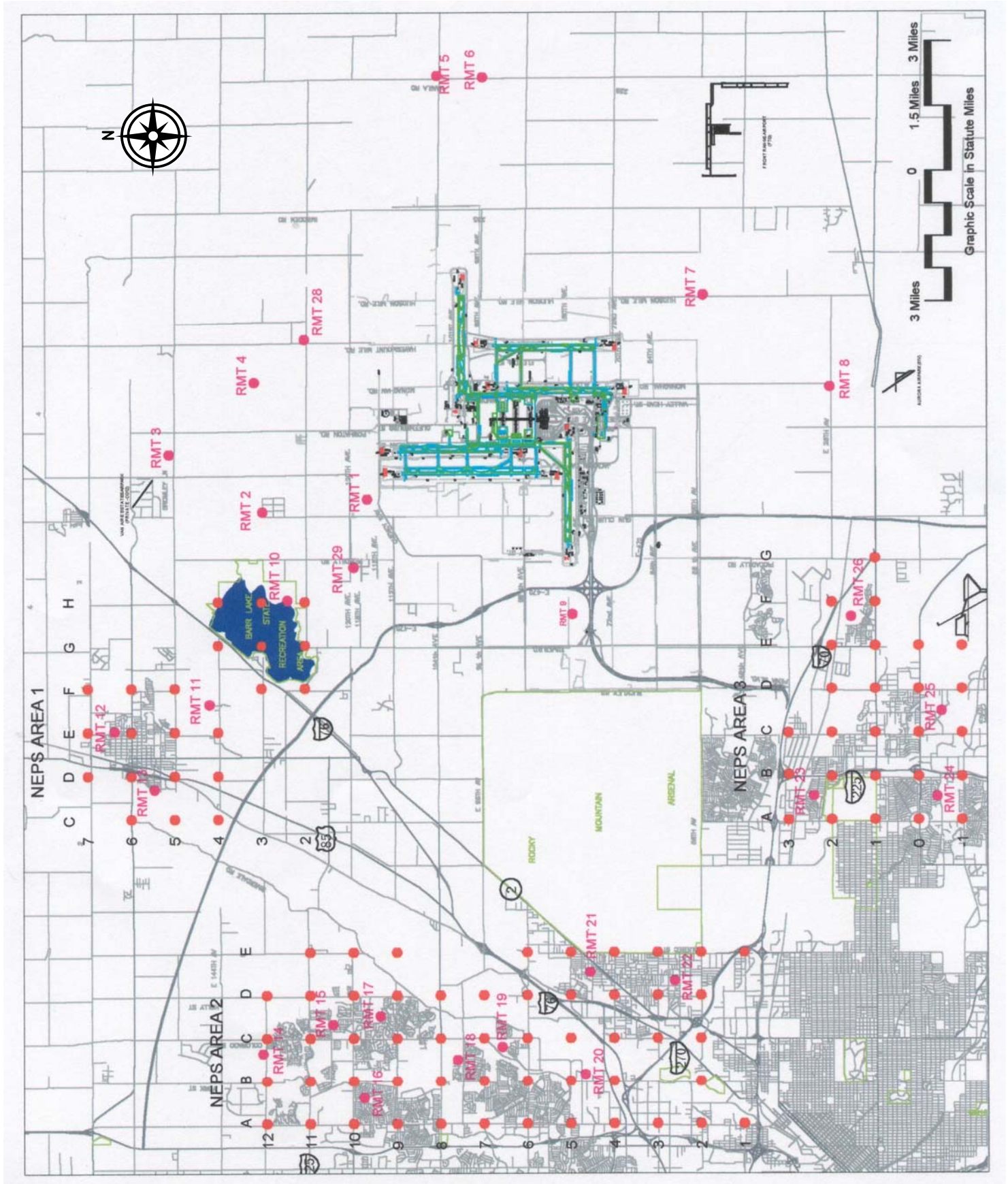
Noise Complaint Hotline:

(303) 342-2380

Toll Free 1-800-417-2988



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

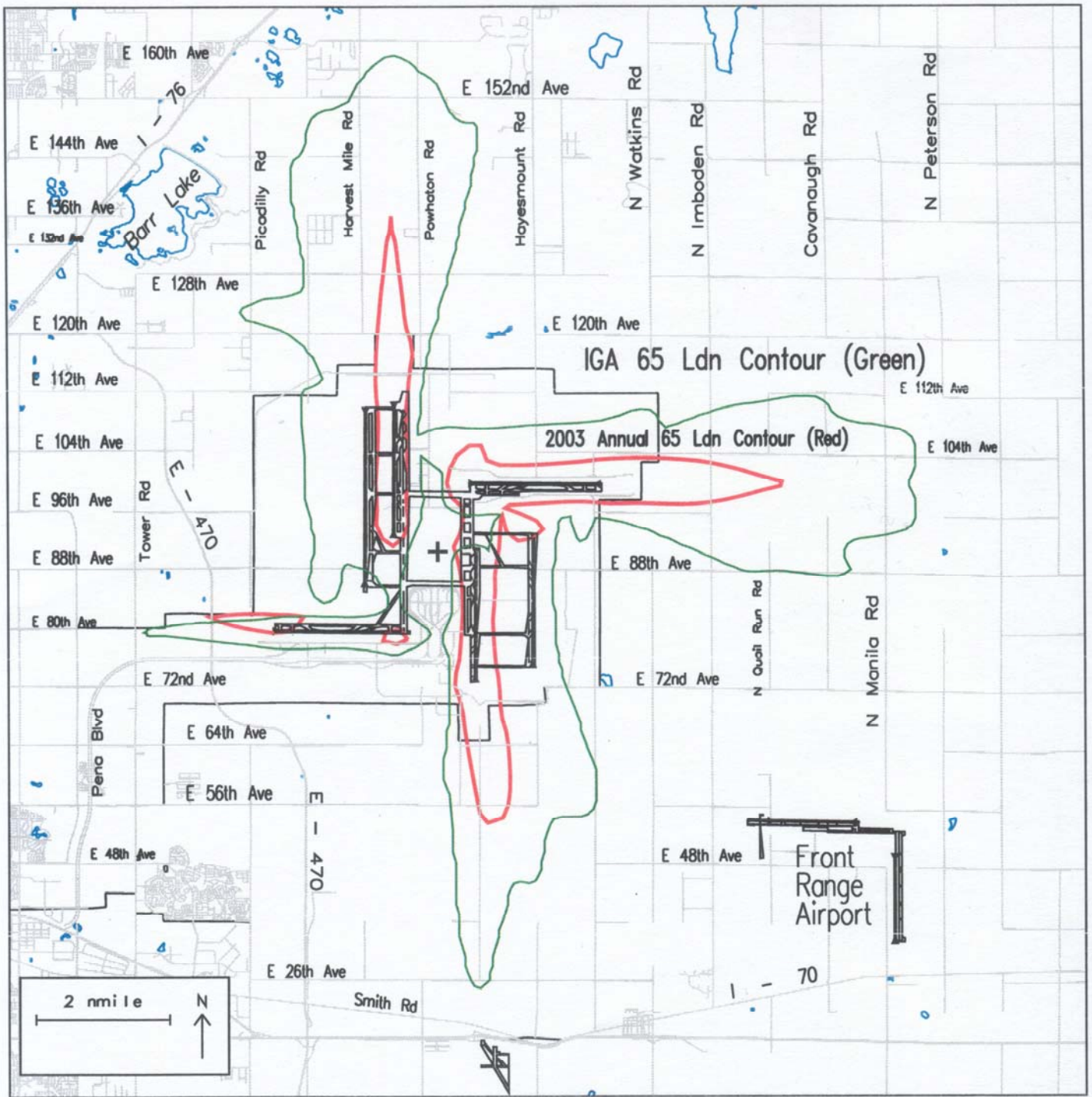


Annual 2003

January 1, 2003 - December 31, 2003

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

2003 Annual – DEN 65 Ldn Contour



2003 Annual - Denver/Adams County IGA NEPS Values

Area 2			
2003 Annual			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,1	38.6	36.3	-2.3
A,2	37.6	36.9	-0.7
A,3	42.3	37.7	-4.6
A,4	45.3	38.4	-6.9
A,5	43.9	39.4	-4.5
A,6	37.5	39.5	2.0
A,7	37.7	39.9	2.2
A,8	36.5	38.8	2.3
A,9	36.3	36.5	0.2
A,10	37.6	35.3	-2.3
A,11	39.2	35.1	-4.1
A,12	41.2	34.6	-6.6
B,2	39.5	37.5	-2.0
B,4	42.5	39.1	-3.4
B,5	43.1	40.2	-2.9
B,6	39.0	40.2	1.2
B,7	39.0	40.7	1.7
B,8	38.0	38.9	0.9
B,9	38.3	36.7	-1.6
B,10	39.0	36.2	-2.8
B,11	40.4	36.0	-4.4
B,12	42.6	35.4	-7.3
C,2	41.0	38.3	-2.7
C,3	43.3	39.0	-4.3
C,4	43.5	39.8	-3.7
C,5	43.4	41.1	-2.3
C,6	43.3	41.2	-2.2
C,7	43.3	41.4	-1.9
C,8	42.6	39.2	-3.5
C,9	42.2	37.3	-4.9
C,10	41.6	37.4	-4.2
C,11	42.5	37.0	-5.6
C,12	44.3	36.2	-8.1
D,2	41.7	38.9	-2.8
D,3	46.2	39.9	-6.3
D,4	48.4	40.7	-7.8
D,5	48.2	42.3	-5.9
D,6	46.2	42.2	-4.0
D,7	44.2	42.2	-2.0
D,8	43.7	39.4	-4.4
D,9	43.1	38.5	-4.6
D,10	44.9	38.4	-6.5
D,11	44.5	37.6	-6.9
D,12	45.1	36.9	-8.2
E,1	42.4	38.3	-4.1
E,2	42.2	39.3	-2.9
E,3	46.7	40.9	-5.8
E,4	51.2	41.8	-9.4
E,5	51.0	43.4	-7.6
E,6	44.6	43.5	-1.1
E,9	43.1	39.9	-3.2
E,10	43.1	39.0	-4.1
E,11	46.1	38.0	-8.1

Area 1			
2003 Annual			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
C,4	44.2	36.3	-7.9
C,5	36.7	34.0	-2.7
C,6	36.0	32.7	-3.3
D,4	41.1	35.7	-5.4
D,5	34.2	34.1	-0.1
D,6	36.0	33.0	-3.0
D,7	41.4	33.7	-7.7
E,4	38.3	36.4	-1.9
E,5	34.8	35.6	0.8
E,6	36.7	35.1	-1.6
E,7	41.4	34.0	-7.4
F,2	51.7	42.3	-9.4
F,3	43.7	39.6	-4.1
F,5	37.3	35.9	-1.4
F,6	38.5	35.9	-2.6
F,7	42.1	36.1	-6.0
G,2	51.2	43.6	-7.6
G,3	42.1	40.0	-2.1
G,4	40.2	37.1	-3.1
H,2	50.1	45.2	-4.9
H,3	46.0	40.6	-5.5
H,4	46.1	37.2	-8.9

Area 3			
2003 Annual			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,-1	38.9	33.2	-5.7
A,0	39.6	33.4	-6.2
A,1	43.2	34.0	-9.2
A,2	45.7	35.4	-10.3
A,3	45.6	36.6	-9.0
B,-1	37.9	32.8	-5.1
B,0	39.2	32.9	-6.3
B,1	42.6	33.5	-9.1
B,2	45.8	34.7	-11.1
B,3	45.7	36.3	-9.4
C,-1	36.7	33.5	-3.2
C,0	37.1	33.5	-3.6
C,1	39.5	34.2	-5.3
C,2	44.8	35.0	-9.8
C,3	46.5	36.6	-9.9
D,-1	32.6	34.2	1.6
D,0	33.3	34.4	1.1
D,1	37.3	34.6	-2.7
D,2	43.0	35.4	-7.7
E,-1	31.4	34.6	3.2
E,0	33.1	35.0	1.9
E,1	36.2	34.7	-1.5
E,2	40.6	35.1	-5.5
F,1	36.5	34.6	-1.9
F,2	39.4	35.6	-3.8
G,1	42.5	35.2	-7.3

2003 Annual – DEN Complaint Statistics

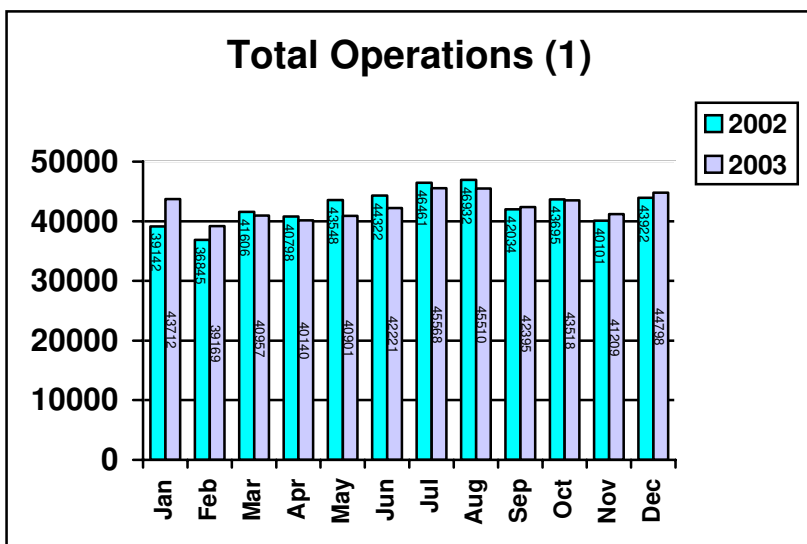
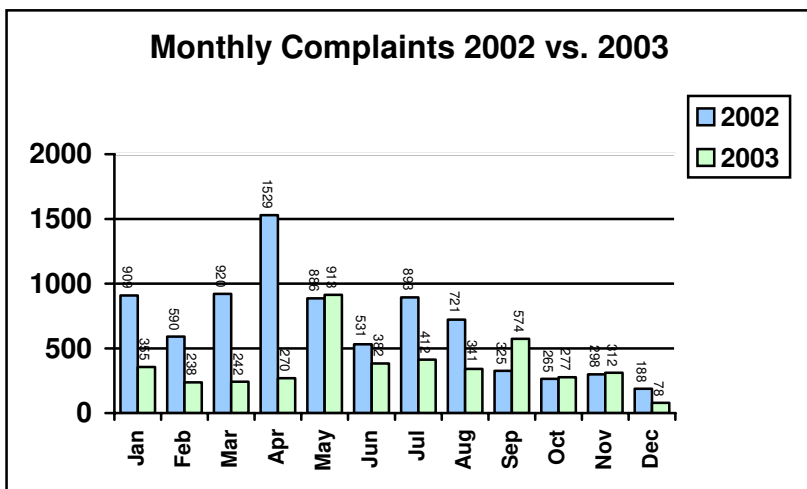
Number of Complaints	2002	2003
Total number of noise complaints	8,082	4,394
Total number of hotline callers/households	215/215	191/191
Max # of complaints by an individual/household	2,200/2,200	1,151/1,151

Breakdown by time of day	2002	%	2003	%
Day Hours (7:00 am – 9:59 pm)	6,640	82	3,647	83
Night Hours (10:00 pm – 6:59 am)	1,442	18	747	17
All Hours	8,082	100	4,394	100

Breakdown By Month							
1q03		2q03		3q03		4q03	
January	355	April	270	July	412	October	277
February	238	May	913	August	341	November	312
March	242	June	382	September	574	December	78
Total	835		1,565		1,327		667

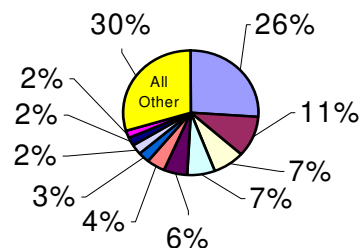
City	City Total	Households	Max #*
Arvada	0	0	0
Aurora	1063	33	323
Bennett	38	5	19
Boulder	42	4	35
Brighton	113	26	17
Broomfield	0	0	0
Castle Rock	3	1	3
Commerce City	91	12	22
Conifer	0	0	0
Denver	77	24	29
Elizabeth	243	7	104
Englewood	1	1	1
Estes Park	0	0	0
Evergreen	136	2	109
Federal Heights	0	0	0
Fort Collins	47	1	47
Fort Lupton	2	1	2
Franktown	2	1	2
Golden	2	2	1
Henderson	63	2	62
Highlands Ranch	1	1	1
Hudson	13	4	6
Kiowa	1	1	1
Lafayette	2	1	2
Lakewood	511	4	464
Larkspur	0	0	0
Littleton	25	1	25
Lonetree	0	0	0
Louisville	0	0	0
Louviers	13	1	13
Lyons	0	0	0
Morrison	0	0	0
Nederland	64	4	57
Northglenn	5	3	3
Parker	1246	20	1151
Pine	1	1	1
Sedalia	0	0	0
Superior	0	0	0
Thornton	325	20	291
Watkins	21	4	13
Westminster	242	3	189
Wheatridge	1	1	1
Windsor	0	0	0
Total	4,394	191	2,994

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

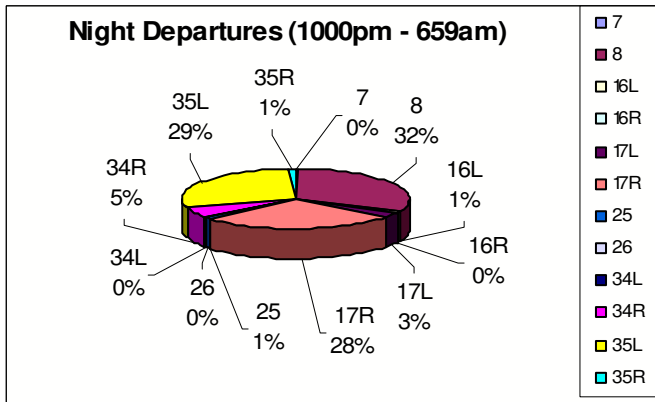
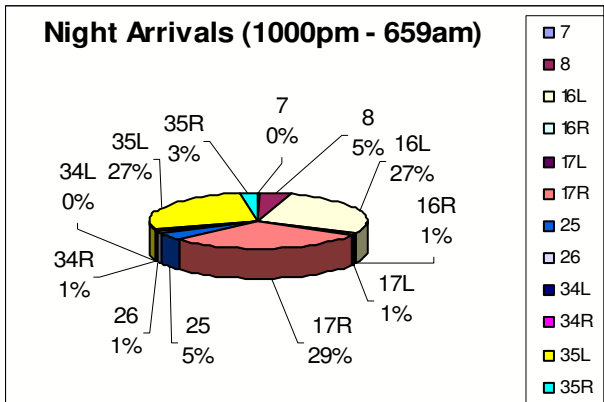
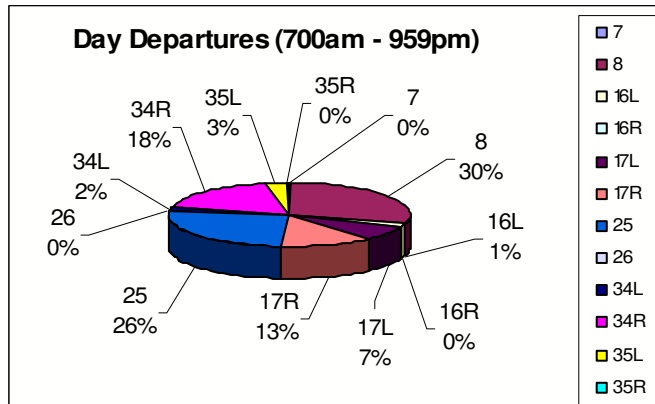
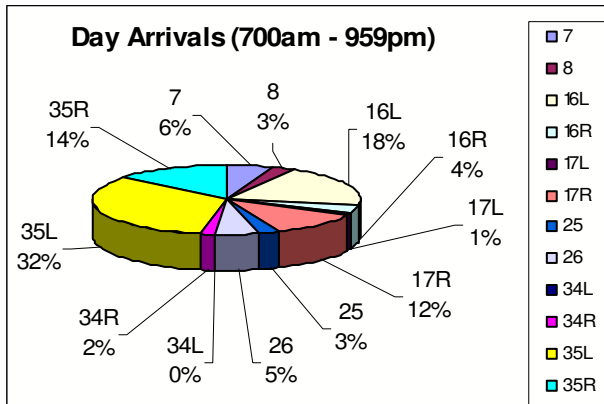
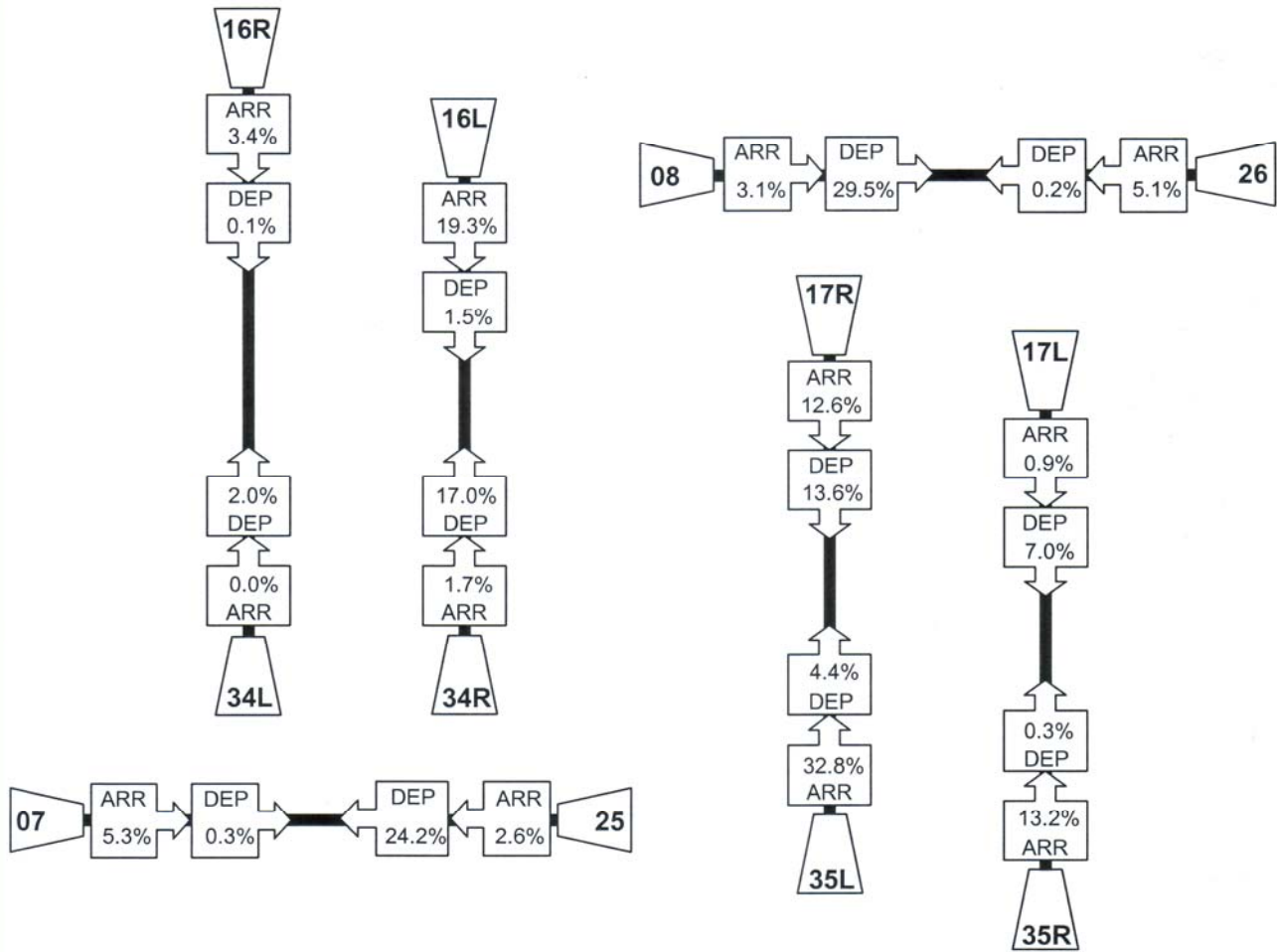


(1) Total Operations includes Air Carrier, General Aviation, and Air Taxi. Source: Federal Aviation Administration

Top 10 Complainants vs. All Others



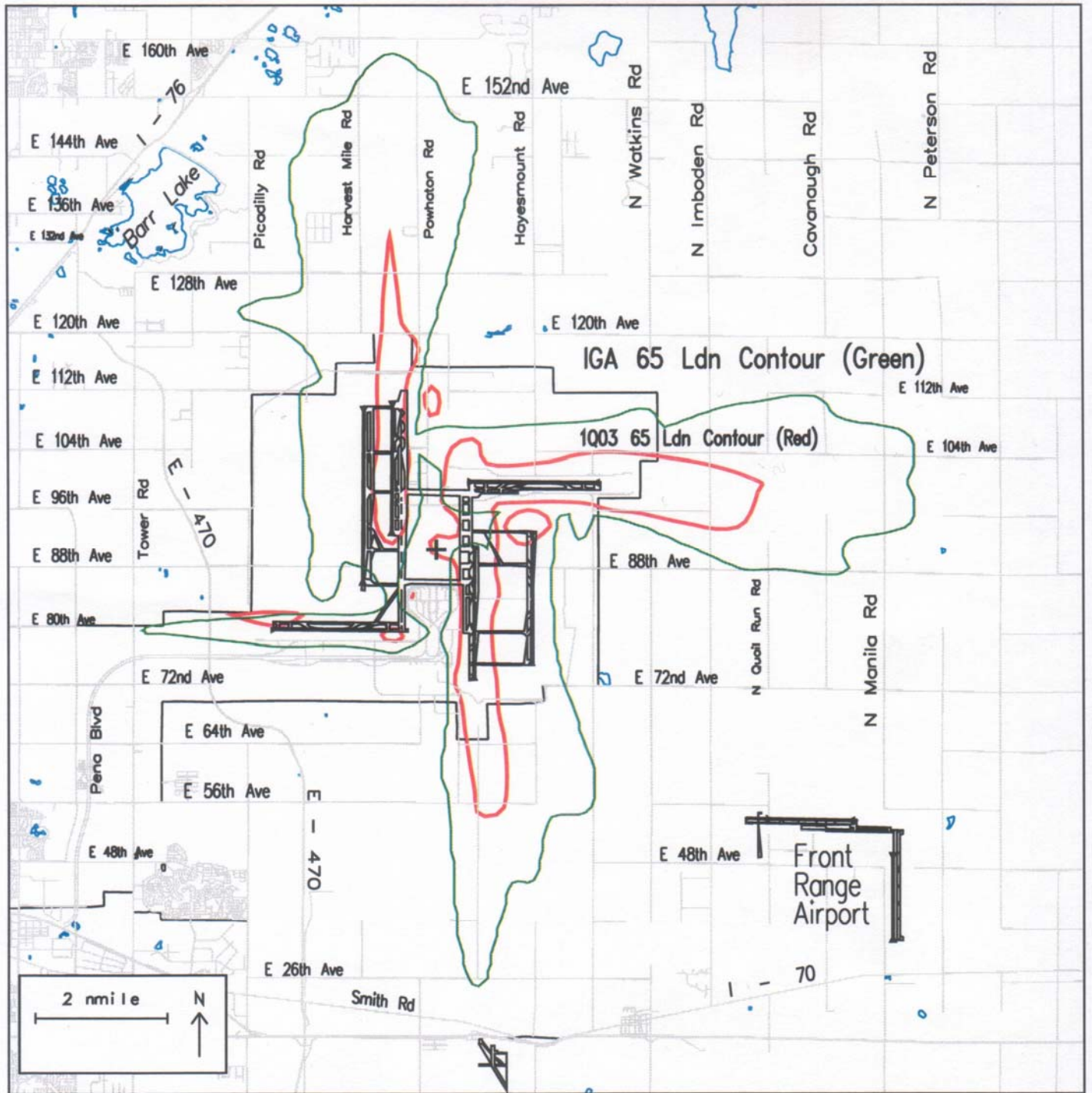
2003 Annual – DEN Runway Utilization



First Quarter 2003

January 1, 2003 – March 31, 2003

1st Quarter 2003 - 65 Ldn Contour



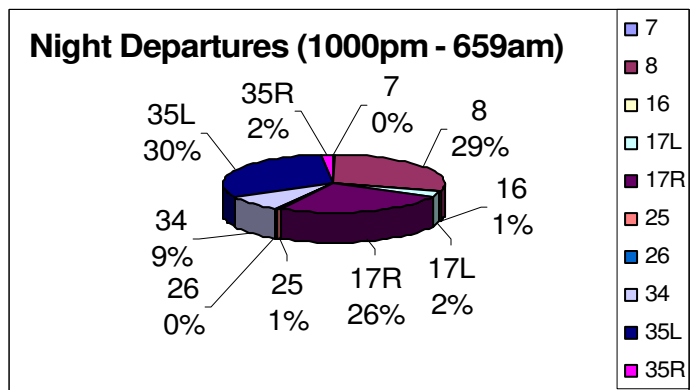
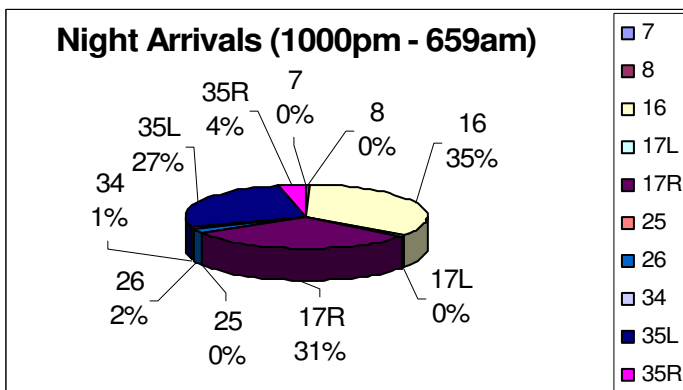
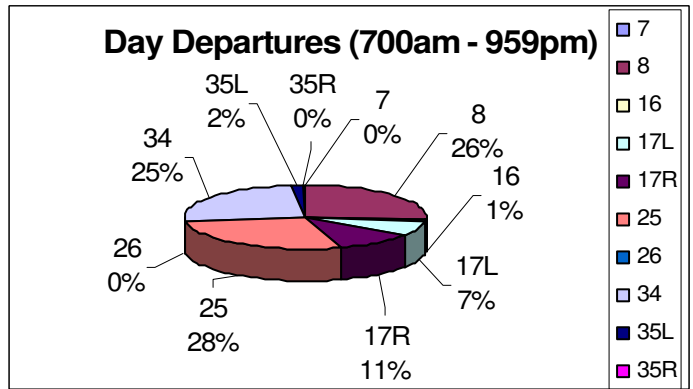
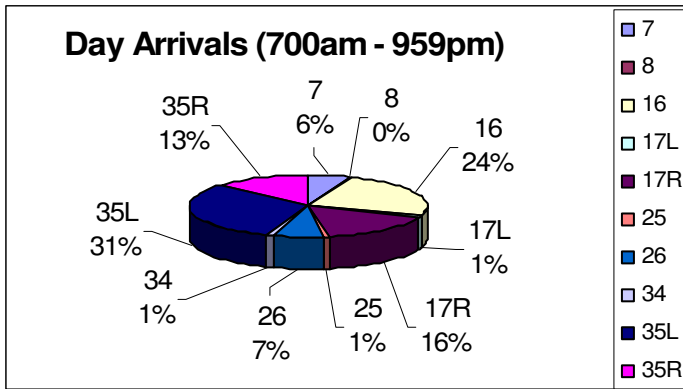
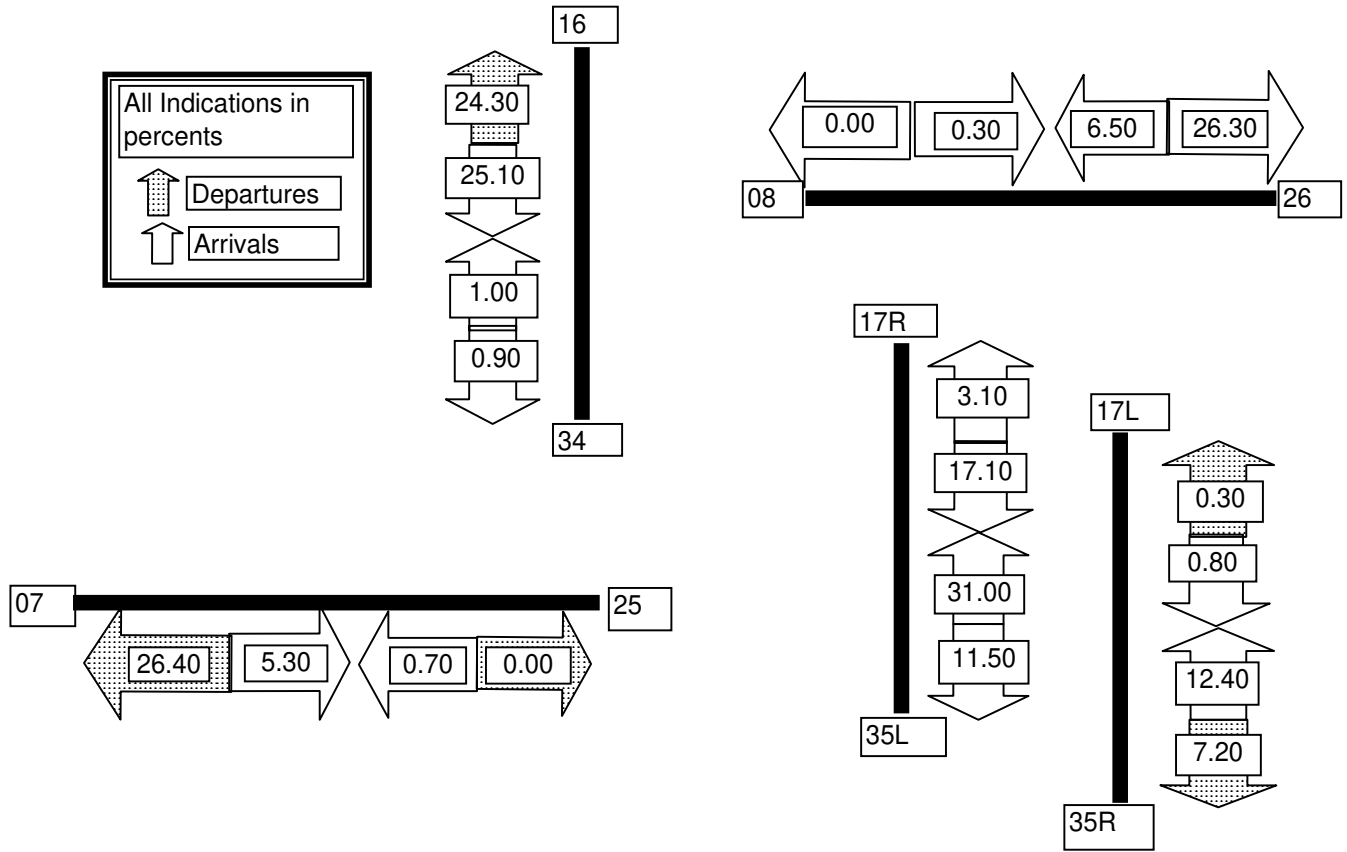
1st Quarter 2003 - Denver/Adams County IGA NEPS Values

Area 2			
1st Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,1	38.6	35.6	-3.0
A,2	37.6	36.1	-1.5
A,3	42.3	36.9	-5.4
A,4	45.3	37.8	-7.5
A,5	43.9	38.7	-5.2
A,6	37.5	38.7	1.2
A,7	37.7	39.2	1.5
A,8	36.5	38.3	1.8
A,9	36.3	35.9	-0.4
A,10	37.6	34.3	-3.3
A,11	39.2	33.5	-5.7
A,12	41.2	32.7	-8.5
B,2	39.5	36.7	-2.8
B,4	42.5	38.4	-4.1
B,5	43.1	39.5	-3.6
B,6	39.0	39.4	0.4
B,7	39.0	40.1	1.1
B,8	38.0	38.5	0.5
B,9	38.3	36.1	-2.2
B,10	39.0	34.8	-4.2
B,11	40.4	34.1	-6.3
B,12	42.6	33.3	-9.3
C,2	41.0	37.5	-3.5
C,3	43.3	38.5	-4.8
C,4	43.5	39.2	-4.3
C,5	43.4	40.4	-3.0
C,6	43.3	40.2	-3.1
C,7	43.3	40.8	-2.5
C,8	42.6	38.6	-4.0
C,9	42.2	36.2	-6.0
C,10	41.6	35.4	-6.2
C,11	42.5	34.9	-7.6
C,12	44.3	34.1	-10.2
D,2	41.7	38.2	-3.5
D,3	46.2	39.3	-6.9
D,4	48.4	40.2	-8.2
D,5	48.2	41.5	-6.7
D,6	46.2	41.3	-5.0
D,7	44.2	41.3	-2.9
D,8	43.7	38.6	-5.1
D,9	43.1	36.8	-6.3
D,10	44.9	36.2	-8.8
D,11	44.5	35.7	-8.8
D,12	45.1	34.8	-10.3
E,1	42.4	37.9	-4.5
E,2	42.2	38.8	-3.5
E,3	46.7	40.4	-6.3
E,4	51.2	41.2	-10.0
E,5	51.0	42.8	-8.3
E,6	44.6	42.5	-2.1
E,9	43.1	37.7	-5.5
E,10	43.1	36.7	-6.4
E,11	46.1	36.3	-9.8

Area 1			
1st Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
C,4	44.2	34.9	-9.4
C,5	36.7	31.8	-4.9
C,6	36.0	31.4	-4.6
D,4	41.1	33.7	-7.4
D,5	34.2	32.2	-2.0
D,6	36.0	31.4	-4.6
D,7	41.4	32.9	-8.6
E,4	38.3	34.7	-3.6
E,5	34.8	34.5	-0.3
E,6	36.7	33.1	-3.6
E,7	41.4	32.8	-8.6
F,2	51.7	41.7	-10.0
F,3	43.7	38.2	-5.5
F,5	37.3	35.0	-2.3
F,6	38.5	35.0	-3.5
F,7	42.1	34.8	-7.3
G,2	51.2	43.2	-8.0
G,3	42.1	38.5	-3.6
G,4	40.2	35.9	-4.3
H,2	50.1	44.2	-5.9
H,3	46.0	38.7	-7.3
H,4	46.1	35.8	-10.3

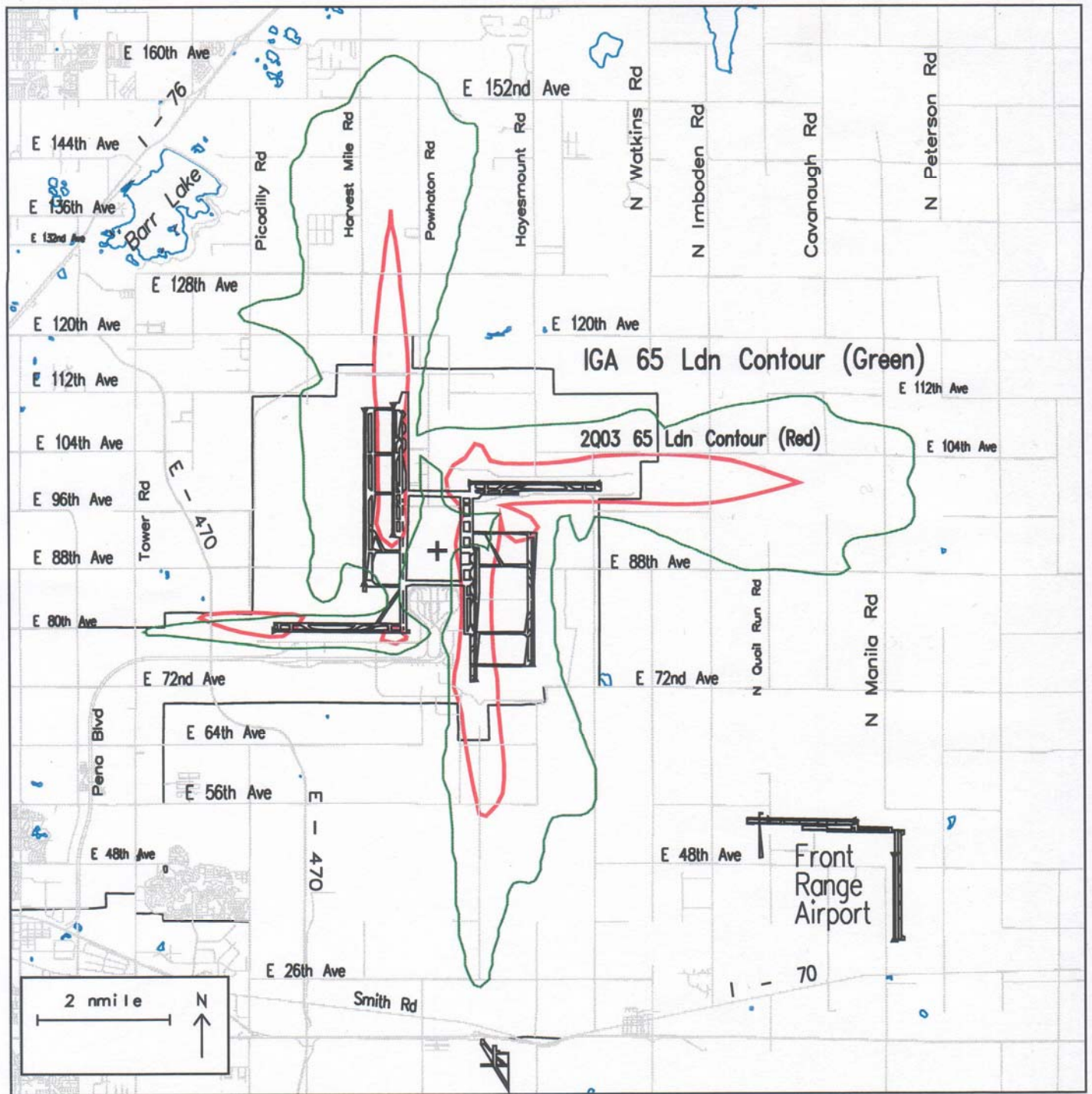
Area 3			
1st Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,-1	38.9	33.4	-5.5
A,0	39.6	33.6	-6.0
A,1	43.2	34.3	-8.9
A,2	45.7	35.7	-10.1
A,3	45.6	36.8	-8.8
B,-1	37.9	32.6	-5.3
B,0	39.2	32.7	-6.5
B,1	42.6	33.3	-9.3
B,2	45.8	34.6	-11.2
B,3	45.7	36.1	-9.6
C,-1	36.7	32.4	-4.3
C,0	37.1	32.7	-4.4
C,1	39.5	33.2	-6.4
C,2	44.8	34.4	-10.4
C,3	46.5	36.0	-10.5
D,-1	32.6	32.9	0.3
D,0	33.3	33.1	-0.2
D,1	37.3	33.4	-4.0
D,2	43.0	34.3	-8.7
E,-1	31.4	33.4	2.0
E,0	33.1	33.4	0.3
E,1	36.2	33.6	-2.6
E,2	40.6	34.2	-6.4
F,1	36.5	33.9	-2.6
F,2	39.4	35.0	-4.4
G,1	42.5	36.0	-6.5

1st Quarter 2003 - Runway Utilization



Second Quarter 2003
April 1, 2003 – June 30, 2003

2nd Quarter 2003 - 65 Ldn Contour



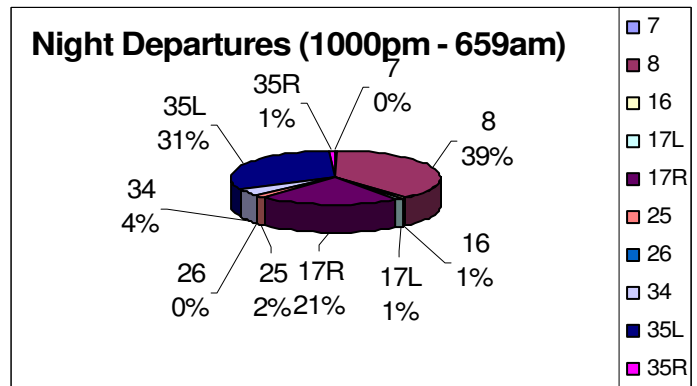
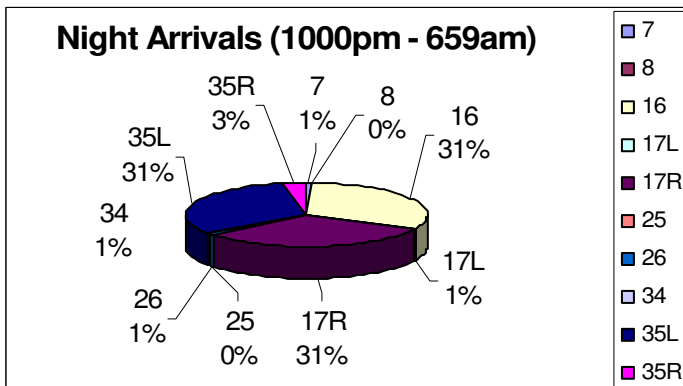
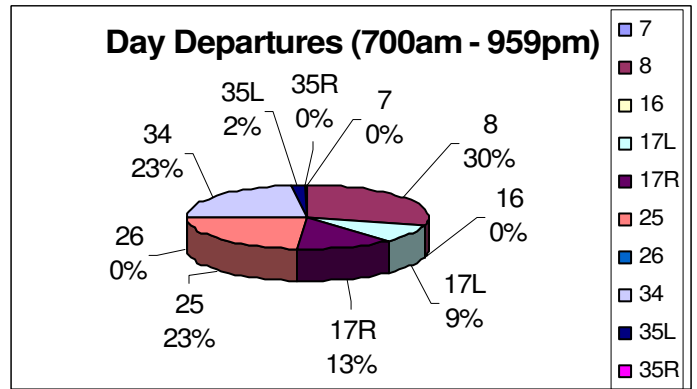
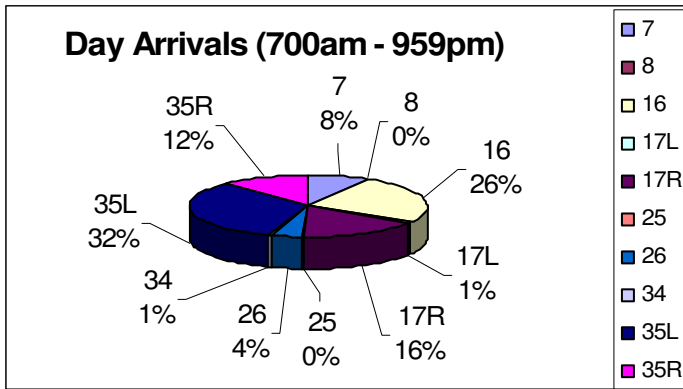
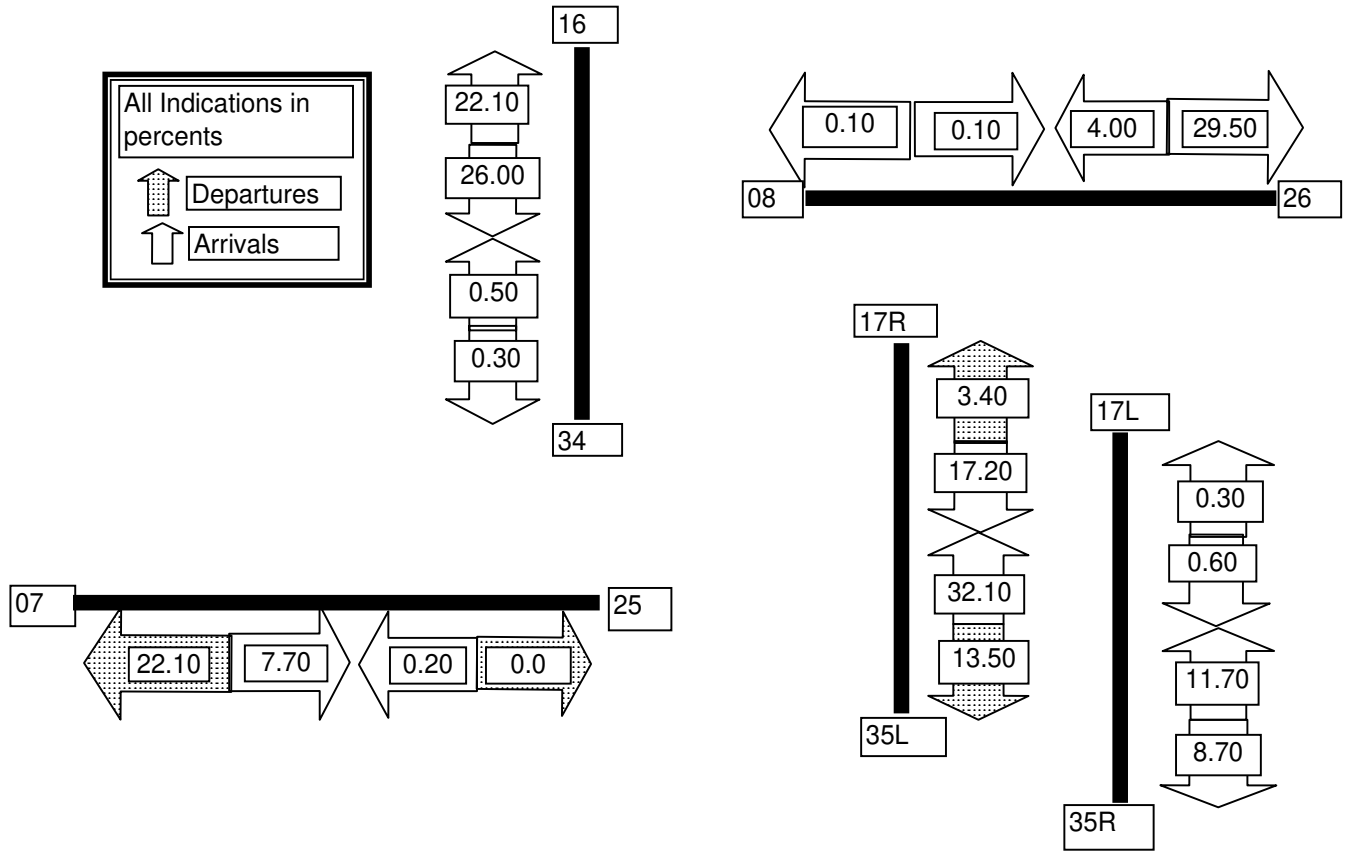
2nd Quarter 2003 - Denver/Adams County IGA NEPS Values

Area 2			
2 nd Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,1	38.6	35.9	-2.7
A,2	37.6	36.8	-0.8
A,3	42.3	37.8	-4.5
A,4	45.3	38.6	-6.7
A,5	43.9	39.7	-4.2
A,6	37.5	39.7	2.2
A,7	37.7	39.9	2.2
A,8	36.5	39.0	2.5
A,9	36.3	36.6	0.3
A,10	37.6	35.5	-2.1
A,11	39.2	35.1	-4.1
A,12	41.2	34.8	-6.4
B,2	39.5	37.3	-2.2
B,4	42.5	39.2	-3.3
B,5	43.1	40.5	-2.6
B,6	39.0	40.4	1.4
B,7	39.0	40.7	1.7
B,8	38.0	39.1	1.1
B,9	38.3	36.9	-1.4
B,10	39.0	36.3	-2.7
B,11	40.4	36.4	-4.1
B,12	42.6	36.0	-6.6
C,2	41.0	38.4	-2.6
C,3	43.3	39.2	-4.1
C,4	43.5	40.0	-3.5
C,5	43.4	41.5	-1.9
C,6	43.3	41.3	-2.0
C,7	43.3	41.4	-1.9
C,8	42.6	39.4	-3.2
C,9	42.2	37.7	-4.5
C,10	41.6	37.8	-3.8
C,11	42.5	37.7	-4.8
C,12	44.3	37.1	-7.2
D,2	41.7	39.2	-2.5
D,3	46.2	40.1	-6.1
D,4	48.4	41.0	-7.4
D,5	48.2	42.7	-5.6
D,6	46.2	42.3	-3.9
D,7	44.2	42.3	-1.9
D,8	43.7	39.8	-3.9
D,9	43.1	39.2	-3.9
D,10	44.9	38.9	-6.0
D,11	44.5	38.2	-6.3
D,12	45.1	37.5	-7.6
E,1	42.4	38.6	-3.8
E,2	42.2	39.8	-2.4
E,3	46.7	41.1	-5.6
E,4	51.2	42.0	-9.2
E,5	51.0	43.9	-7.1
E,6	44.6	43.6	-1.0
E,9	43.1	40.6	-2.5
E,10	43.1	39.6	-3.5
E,11	46.1	38.6	-7.5

Area 1			
2 nd Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
C,4	44.2	36.8	-7.4
C,5	36.7	35.2	-1.5
C,6	36.0	33.6	-2.4
D,4	41.1	36.4	-4.7
D,5	34.2	34.7	0.5
D,6	36.0	33.5	-2.5
D,7	41.4	34.1	-7.3
E,4	38.3	37.0	-1.3
E,5	34.8	36.2	1.4
E,6	36.7	34.7	-2.0
E,7	41.4	34.3	-7.1
F,2	51.7	43.0	-8.7
F,3	43.7	40.2	-3.5
F,5	37.3	36.7	-0.6
F,6	38.5	36.2	-2.3
F,7	42.1	36.1	-6.0
G,2	51.2	44.6	-6.6
G,3	42.1	40.8	-1.3
G,4	40.2	37.9	-2.3
H,2	50.1	46.9	-3.2
H,3	46.0	41.4	-4.6
H,4	46.1	38.2	-8.0

Area 3			
2 nd Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,-1	38.9	33.1	-5.8
A,0	39.6	33.1	-6.5
A,1	43.2	33.7	-9.5
A,2	45.7	34.9	-10.9
A,3	45.6	36.1	-9.5
B,-1	37.9	32.8	-5.1
B,0	39.2	33.1	-6.1
B,1	42.6	33.6	-9.0
B,2	45.8	34.5	-11.3
B,3	45.7	36.1	-9.6
C,-1	36.7	33.6	-3.1
C,0	37.1	33.4	-3.7
C,1	39.5	34.5	-5.0
C,2	44.8	34.8	-10.0
C,3	46.5	35.9	-10.6
D,-1	32.6	34.6	2.0
D,0	33.3	34.9	1.6
D,1	37.3	35.4	-1.9
D,2	43.0	35.6	-7.4
E,-1	31.4	35.5	4.1
E,0	33.1	36.7	3.6
E,1	36.2	35.6	-0.6
E,2	40.6	35.5	-5.2
F,1	36.5	35.8	-0.7
F,2	39.4	35.9	-3.5
G,1	42.5	35.1	-7.4

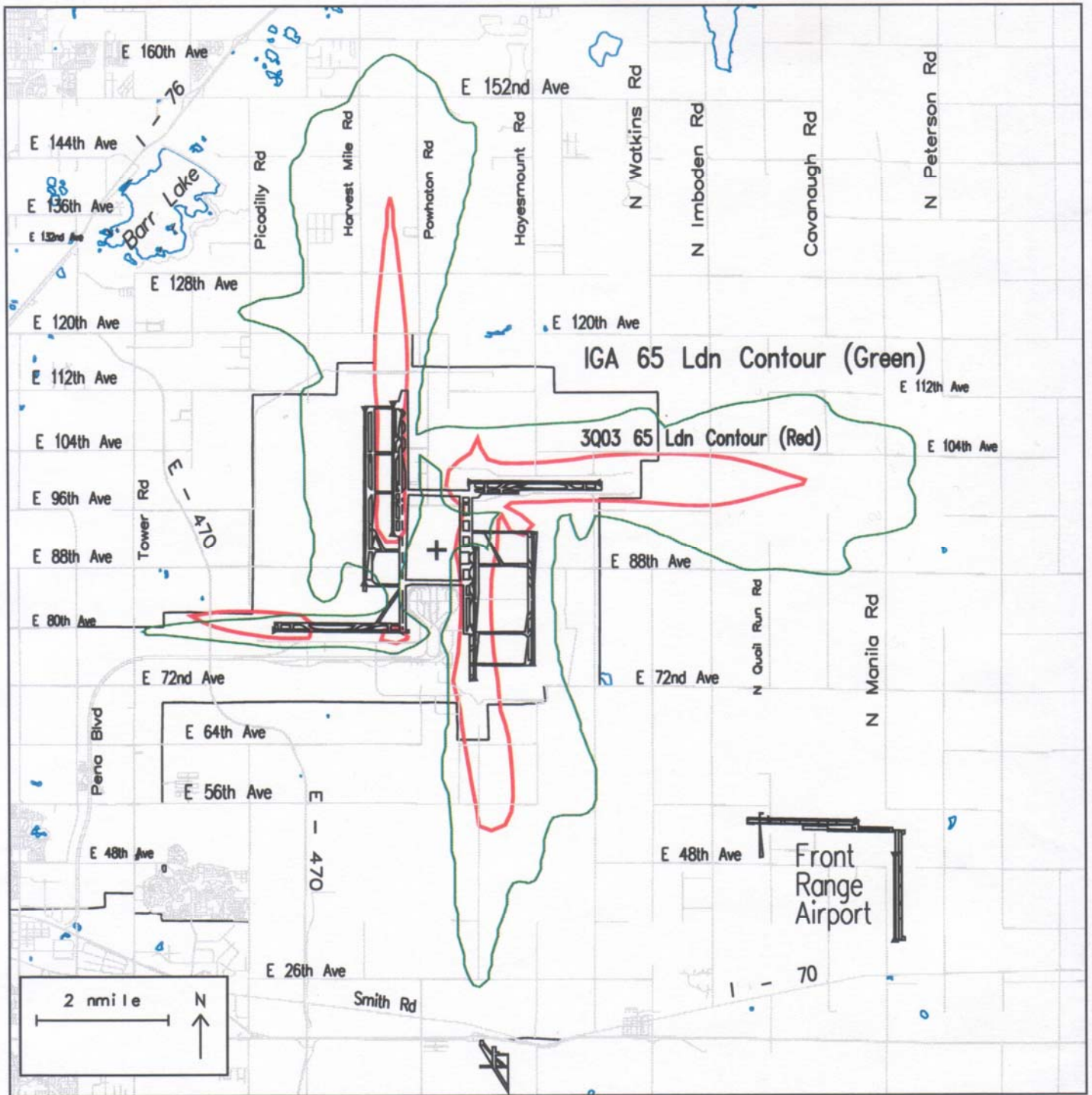
2nd Quarter 2003 – DEN Runway Utilization



Third Quarter 2003

July 1, 2003 – September 30, 2003

3rd Quarter 2003 – DEN 65 Ldn Contour



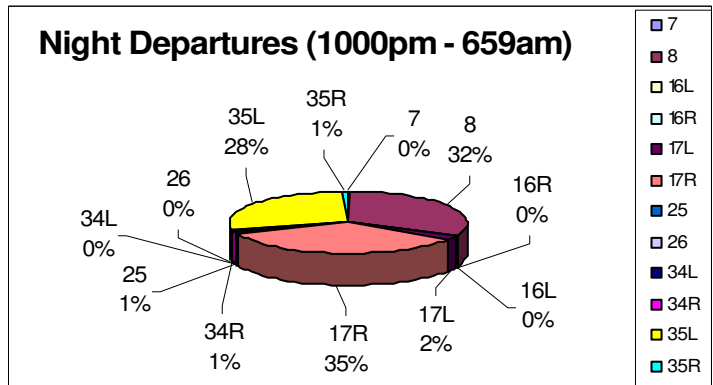
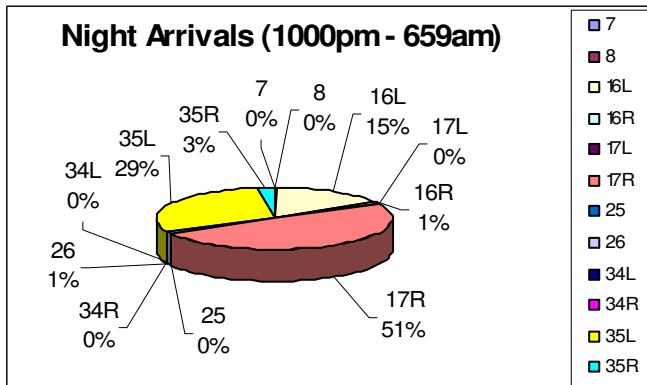
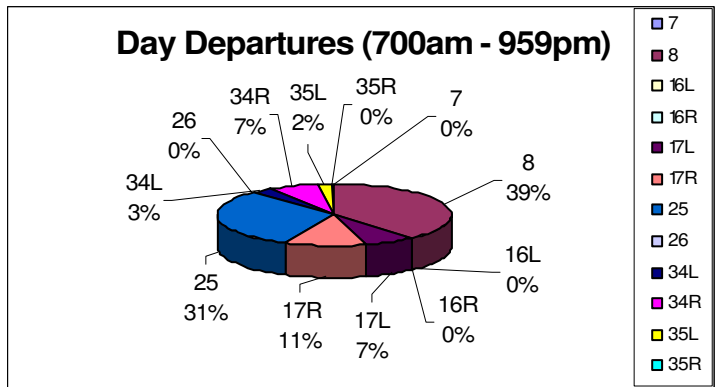
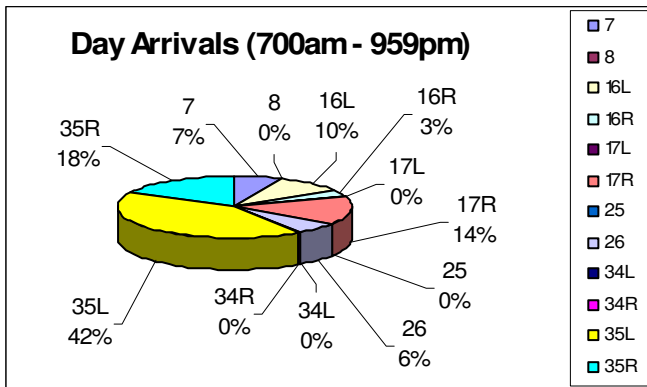
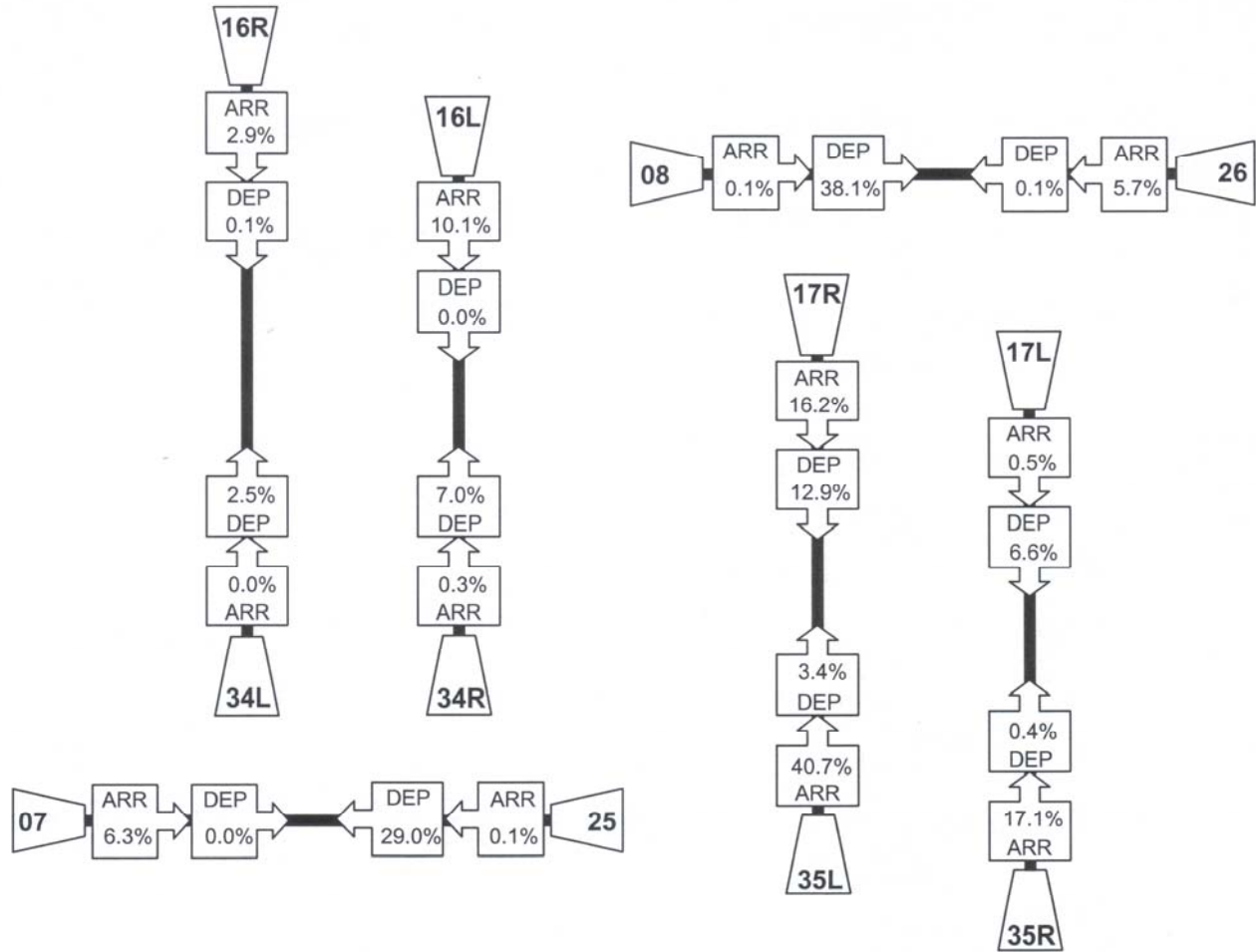
3rd Quarter 2003 - Denver/Adams County IGA NEPS Values

Area 2			
3 rd Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,1	38.6	36.9	-1.7
A,2	37.6	37.6	0.0
A,3	42.3	38.4	-3.9
A,4	45.3	39.2	-6.2
A,5	43.9	40.2	-3.8
A,6	37.5	40.6	3.1
A,7	37.7	41.0	3.3
A,8	36.5	39.7	3.2
A,9	36.3	36.9	0.6
A,10	37.6	35.9	-1.7
A,11	39.2	35.4	-3.8
A,12	41.2	35.0	-6.3
B,2	39.5	38.3	-1.2
B,4	42.5	39.9	-2.6
B,5	43.1	41.0	-2.1
B,6	39.0	41.4	2.4
B,7	39.0	41.8	2.8
B,8	38.0	39.6	1.6
B,9	38.3	37.1	-1.2
B,10	39.0	36.4	-2.6
B,11	40.4	36.2	-4.2
B,12	42.6	35.8	-6.8
C,2	41.0	39.1	-1.9
C,3	43.3	39.9	-3.4
C,4	43.5	40.5	-3.1
C,5	43.4	42.0	-1.5
C,6	43.3	42.4	-0.9
C,7	43.3	42.6	-0.7
C,8	42.6	39.7	-2.9
C,9	42.2	37.5	-4.7
C,10	41.6	37.5	-4.1
C,11	42.5	37.3	-5.2
C,12	44.3	36.8	-7.5
D,2	41.7	39.7	-2.0
D,3	46.2	40.9	-5.3
D,4	48.4	41.4	-7.0
D,5	48.2	43.4	-4.8
D,6	46.2	43.5	-2.7
D,7	44.2	43.3	-0.9
D,8	43.7	39.7	-4.0
D,9	43.1	38.7	-4.4
D,10	44.9	38.8	-6.1
D,11	44.5	38.4	-6.2
D,12	45.1	37.7	-7.4
E,1	42.4	38.5	-3.9
E,2	42.2	40.1	-2.1
E,3	46.7	42.0	-4.7
E,4	51.2	42.6	-8.6
E,5	51.0	44.1	-6.9
E,6	44.6	44.9	0.3
E,9	43.1	40.4	-2.8
E,10	43.1	39.6	-3.5
E,11	46.1	38.7	-7.4

Area 1			
3 rd Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
C,4	44.2	37.2	-7.0
C,5	36.7	34.6	-2.1
C,6	36.0	32.9	-3.1
D,4	41.1	36.9	-4.3
D,5	34.2	35.3	1.1
D,6	36.0	33.8	-2.2
D,7	41.4	34.2	-7.2
E,4	38.3	37.3	-1.0
E,5	34.8	36.2	1.4
E,6	36.7	37.4	0.7
E,7	41.4	35.0	-6.4
F,2	51.7	43.2	-8.5
F,3	43.7	41.0	-2.8
F,5	37.3	36.4	-0.9
F,6	38.5	36.5	-2.0
F,7	42.1	37.5	-4.6
G,2	51.2	44.3	-6.9
G,3	42.1	41.5	-0.6
G,4	40.2	38.0	-2.2
H,2	50.1	45.9	-4.2
H,3	46.0	42.3	-3.7
H,4	46.1	38.2	-7.9

Area 3			
3 rd Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,-1	38.9	33.5	-5.4
A,0	39.6	33.6	-6.0
A,1	43.2	34.1	-9.1
A,2	45.7	35.0	-10.7
A,3	45.6	35.9	-9.7
B,-1	37.9	33.3	-4.6
B,0	39.2	33.3	-5.9
B,1	42.6	33.6	-9.1
B,2	45.8	34.6	-11.2
B,3	45.7	35.4	-10.3
C,-1	36.7	34.7	-2.0
C,0	37.1	34.7	-2.4
C,1	39.5	35.0	-4.5
C,2	44.8	35.5	-9.3
C,3	46.5	36.5	-10.0
D,-1	32.6	35.5	2.9
D,0	33.3	35.4	2.0
D,1	37.3	35.3	-2.0
D,2	43.0	35.7	-7.3
E,-1	31.4	35.6	4.2
E,0	33.1	35.3	2.2
E,1	36.2	35.1	-1.1
E,2	40.6	35.3	-5.3
F,1	36.5	34.7	-1.9
F,2	39.4	35.4	-4.0
G,1	42.5	35.4	-7.1

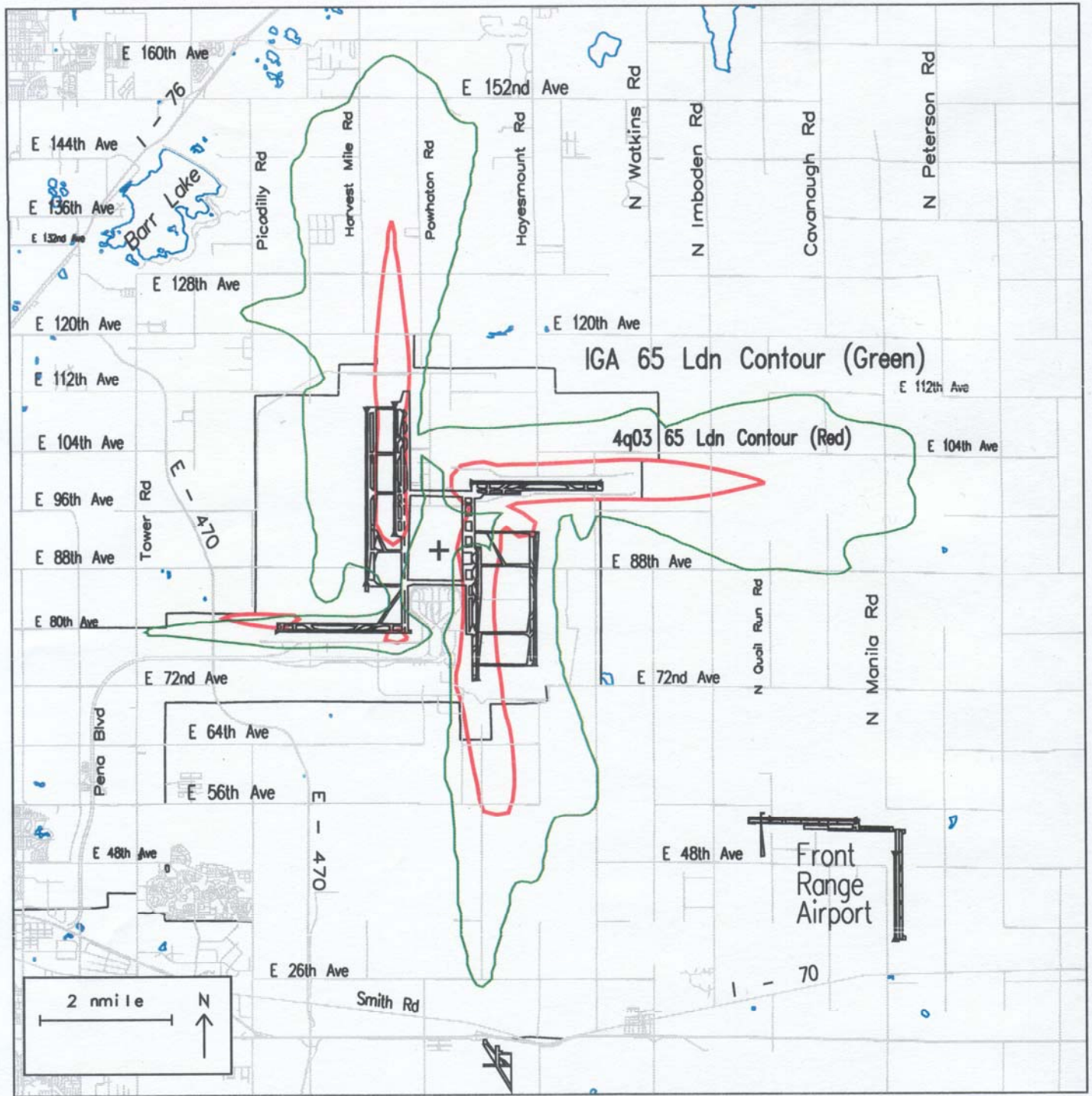
3rd Quarter 2003 – DEN Runway Utilization



Fourth Quarter 2003

October 1, 2003 – December 31, 2003

4th Quarter 2003 – DEN 65 Ldn Contour



4th Quarter 2003 - Denver/Adams County IGA NEPS Values

Area 2			
4 th Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,1	38.6	36.6	-2.0
A,2	37.6	37.0	-0.6
A,3	42.3	37.7	-4.6
A,4	45.3	38.2	-7.1
A,5	43.9	38.8	-5.1
A,6	37.5	38.9	1.4
A,7	37.7	39.4	1.7
A,8	36.5	38.4	1.9
A,9	36.3	35.9	-0.4
A,10	37.6	34.6	-3.0
A,11	39.2	34.2	-5.0
A,12	41.2	33.7	-7.5
B,2	39.5	37.3	-2.2
B,4	42.5	38.7	-3.8
B,5	43.1	39.6	-3.5
B,6	39.0	39.7	0.7
B,7	39.0	40.1	1.1
B,8	38.0	38.5	0.5
B,9	38.3	36.1	-2.2
B,10	39.0	35.3	-3.7
B,11	40.4	35.3	-5.1
B,12	42.6	34.8	-7.8
C,2	41.0	38.1	-2.9
C,3	43.3	38.5	-4.8
C,4	43.5	39.3	-4.2
C,5	43.4	40.4	-3.0
C,6	43.3	40.5	-2.8
C,7	43.3	40.9	-2.4
C,8	42.6	38.8	-3.9
C,9	42.2	36.5	-5.7
C,10	41.6	36.5	-5.1
C,11	42.5	36.5	-6.0
C,12	44.3	35.8	-8.5
D,2	41.7	38.5	-3.2
D,3	46.2	39.2	-7.0
D,4	48.4	40.1	-8.4
D,5	48.2	41.4	-6.8
D,6	46.2	41.5	-4.8
D,7	44.2	41.7	-2.5
D,8	43.7	38.8	-4.9
D,9	43.1	37.5	-5.6
D,10	44.9	37.8	-7.1
D,11	44.5	37.5	-7.0
D,12	45.1	36.7	-8.4
E,1	42.4	38.2	-4.2
E,2	42.2	38.7	-3.5
E,3	46.7	39.8	-6.9
E,4	51.2	41.0	-10.2
E,5	51.0	42.6	-8.4
E,6	44.6	42.7	-1.9
E,9	43.1	39.0	-4.2
E,10	43.1	38.9	-4.2
E,11	46.1	38.0	-8.1

Area 1			
4 th Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
C,4	44.2	35.8	-8.4
C,5	36.7	33.5	-3.2
C,6	36.0	32.4	-3.6
D,4	41.1	35.1	-6.0
D,5	34.2	33.5	-0.7
D,6	36.0	32.8	-3.2
D,7	41.4	33.7	-7.7
E,4	38.3	35.9	-2.4
E,5	34.8	35.3	0.5
E,6	36.7	34.5	-2.3
E,7	41.4	34.1	-7.4
F,2	51.7	41.0	-10.7
F,3	43.7	38.1	-5.6
F,5	37.3	35.7	-1.6
F,6	38.5	35.9	-2.6
F,7	42.1	35.9	-6.3
G,2	51.2	41.9	-9.3
G,3	42.1	38.1	-4.0
G,4	40.2	36.0	-4.2
H,2	50.1	42.8	-7.3
H,3	46.0	38.7	-7.3
H,4	46.1	36.1	-10.0

Area 3			
4 th Quarter 2003			
Grid Points	IGA Annual Leq (24)	Calculated Leq (24)	Difference Leq
A,-1	38.9	32.6	-6.3
A,0	39.6	33.1	-6.5
A,1	43.2	34.1	-9.1
A,2	45.7	35.8	-9.9
A,3	45.6	37.5	-8.1
B,-1	37.9	32.6	-5.3
B,0	39.2	32.4	-6.8
B,1	42.6	33.3	-9.3
B,2	45.8	35.2	-10.6
B,3	45.7	37.5	-8.2
C,-1	36.7	32.9	-3.8
C,0	37.1	33.0	-4.1
C,1	39.5	33.9	-5.6
C,2	44.8	35.3	-9.5
C,3	46.5	37.8	-8.7
D,-1	32.6	33.6	1.0
D,0	33.3	33.9	0.6
D,1	37.3	33.9	-3.4
D,2	43.0	35.5	-7.5
E,-1	31.4	33.5	2.1
E,0	33.1	33.4	0.3
E,1	36.2	34.4	-1.8
E,2	40.6	35.3	-5.3
F,1	36.5	33.4	-3.1
F,2	39.4	35.8	-3.6
G,1	42.5	34.1	-8.4

4th Quarter 2003 – DEN Runway Utilization

