4.0 Special Use Airspace – Subsonic Activity

This section provides an overview of the defined Special Use Airspace (SUA) in the vicinity of Holloman AFB. The analyzed SUA include Military Operations Areas (MOAs), restricted airspace, as well as Military Training Routes (MTRs). Sections 4.1 and 4.2 present the Baseline and the Proposed analyses, respectively.

4.1 Baseline Scenario

Section 4.1.1 presents the airspace operations and modeled mission profiles. Section 4.1.2 describes the modeled areas and routes while Section 4.1.3 describes the airspace noise exposure levels in terms of the L_{dnmr} metric.

4.1.1 Operations

Baseline area-type airspace activity is summarized in Table 4-2 with a total of 10,804 annual sortie. Detailed tables are included in the appendix. The 56th Fighter Wing detachment (56FW, DET) of F-16s contributes the largest portion of sorties at approximately 79 percent followed by the GAF FTS Tornados at 15 percent of annual sorties. Over 99 percent occur during the environmental daytime period (0700-2200). Only the 56th Fighter Wing detachment of F-16s conducts sorties during the environmental nighttime period (2200-0700) accounting for few than one percent of total annual sorties.

Aircraft also utilize seven Military Training Routes (MTRs), with a total 892 sorties, detailed in Table 4-3. Detailed tables are included in the appendix. The 56FW F-16s and the GAF Tornadoes account for the majority of sorties with 55 and 36 percent, respectively. All MTR sorties occur during the DNL daytime period.

Due to variability in typical airspace range schedule tempos, DOD policy specifies airspace noise be evaluated for the busiest month of activity over the course of a year. For Holloman airspace modeling, the busiest month is defined as the average month (annual sorties divided by 12 months) plus 10 percent.

The aircraft sorties are modeled with distinct mission flight profiles which require inputs for average speed, average power setting, altitude distribution, and sortie duration. The mission profiles range in speed from 270 knots for a few Tornado profiles to 400 knots for the QF-4. Reported power settings are consistent across modeled aircraft types at 95% RPM. Altitude distribution is dependent upon mission type and varies from the floor of airspace (in some cases down to ground level) up to the airspace ceilings in excess of 40,000 ft AGL. Sortie duration ranges from 45 minutes to 84 minutes. All mission profiles are detailed in the appendix.

4.1.2 Activity Areas

The aircraft operations presented in Section 4.1.1 were assigned to modeled flight areas and to MTR corridors as depicted in Figure 4-1. The restricted area R-5107 is modeled as a combination of activity within sub-areas (Mesa, Lava, Red Rio, Oscura, and Yonder) and a large area covering most portions of R-5107. Operations that are not assigned to specific sub-areas are modeled in the larger R-5107 area. The remaining flight areas (Cato, Beak, Pecos, and Talon) are modeled consistent with their corresponding airspace boundaries. Airspace altitudes are listed in Table 4-1.

Table 4-1. Airspace Altitude Description

Airspace		Floor (ft MSL)	Ceiling (ft MSL)
Cowboy	ATCAA	23,000	60,000
Beak	A B C	12,500	23,000
Cato		13,500	18,000
Pecos	North High	11,000	18,000
	North Low	500 (AGL)	11,000
	South Low	500 (AGL)	18,000
Talon	High	12,500	60,000
	Low	300 (AGL)	12,500
McGregor	R-5103A	surface	18,000
	R-5103B	surface	unlimited
	R-5103C	surface	unlimited
WSMR	R-5107A	surface	unlimited
	R-5107B	surface	unlimited
	R-5107C	9,000	unlimited
	R-5107D	surface	22,000
	R-5107E	surface	unlimited
	R-5107F	24,000	45,000
	R-5107G	24,000	45,000
	R-5107H	surface	9,000
	R-5107J	surface	9,000
	R-5107K	surface	unlimited
WSMR	R-5109A R-5109B	24,000	unlimited

Source: FAA Order JO 7400.8V (dated 13 Feb 2013)

4.1.3 Noise Exposure

Using the data presented in Section 4.1.1 and 4.1.2, the L_{dnmr} levels were computed by MR_NMAP. No L_{dnmr} levels reach or exceed 60 dB for the Baseline scenario so the results are presented in tabular format. Table 4-4 describes the distributed noise levels for each modeled area and MTR. If the levels within a modeled area vary then the greatest level is presented. The maximum level for area-type operations of 50 dB L_{dnmr} occurs in R-5103 primarily due to the F-16 Close Air Support (CAS) and Surface Attack Tactics (SAT) which occur at altitudes as low as 500 ft AGL. The maximum MTR centerline level of 52 dB L_{dnmr} occurs along IR-133 as it ends in Red Rio primarily due to F-16 operations which occur at 300 to 500 ft AGL.

The POI are exposed to 43 dB L_{dnmr} for all points except the West Trail which is exposed to 45 dB L_{dnmr}. At any given location in the airspace noise events will be heard on an average of about once a week. MR_NMAP does not directly provide the duration of noise events, but they are typically less than a minute or two.

Table 4-2. Modeled Subsonic Area-Type Operations for Baseline Scenario

Unit	Aircraft	R-5107			R-5103			Other Airspace			Total		
		Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total
82ATRS, DET 1	QF-4	250	-	250	40	-	40	90	-	90	380	-	380
96TG	T-38	127	-	127	9	-	9	67	-	67	203	-	203
96TG	C-12	14	-	14	3	-	3	8	-	8	25	-	25
56FW, DET 1	F-16	6,053	29	6,082	516	4	520	1,965	9	1,974	8,534	42	8,576
GAF FTS	Tornado	766	-	766	304	-	304	550	-	550	1,620	-	1,620
Totals		**7,210**	**29**	**7,239**	**872**	**4**	**876**	**2,680**	**9**	**2,689**	**10,762**	**42**	**10,804**

Notes:
(1) Includes Yonder, Lava, Mesa, Red Rio, and Oscura
(2) Includes Centenial and McGregor
(3) Includes Beak (A,B,C), Cowboy ATCAA, Talon and Pecos

Table 4-3. Modeled Subsonic Military Training Route Operations for Baseline Scenario

Unit	Aircraft	VR-176			IR-133			IR-142			IR-134			IR-195			IR-192			IR-194			Total		
		Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total
82ATRS, DET 1	QF-4	-	-	-	7	-	7	7	-	7	7	-	7	3	-	3	7	-	7	3	-	3	34	-	34
96TG	T-38	25	-	25	18	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	43
96TG	C-12	3	-	3	3	-	3	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	8	-	8
56FW, DET 1	F-16	70	-	70	70	-	70	70	-	70	70	-	70	70	-	70	70	-	70	70	-	70	490	-	490
GAF FTS	Tornado	24	-	24	135	-	135	-	-	-	20	-	20	4	-	4	84	-	84	50	-	50	317	-	317
Totals		**122**	**-**	**122**	**233**	**-**	**233**	**77**	**-**	**77**	**98**	**-**	**98**	**77**	**-**	**77**	**162**	**-**	**162**	**123**	**-**	**123**	**892**	**-**	**892**

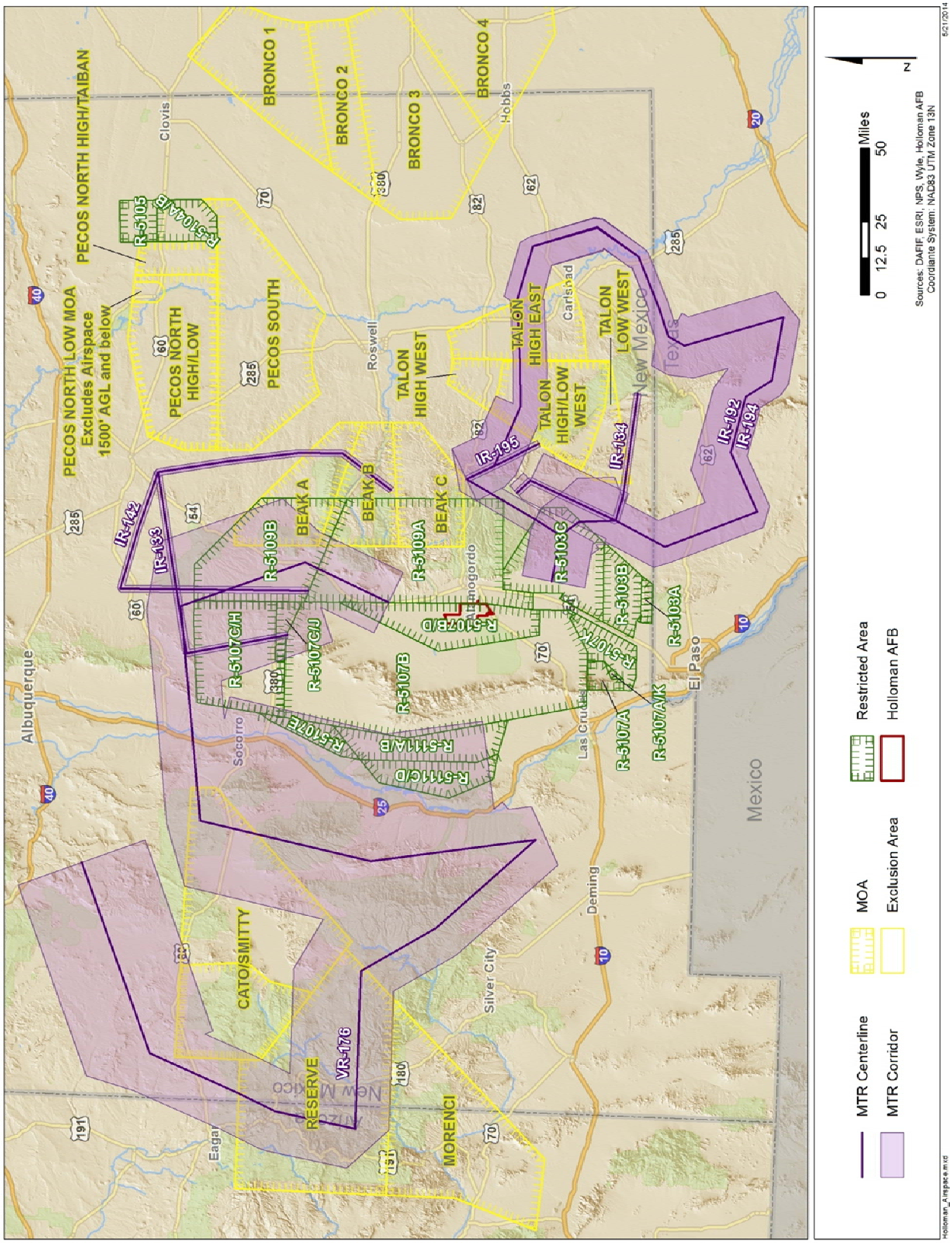

Figure 4-1. Modeled Flight Areas and MTRss

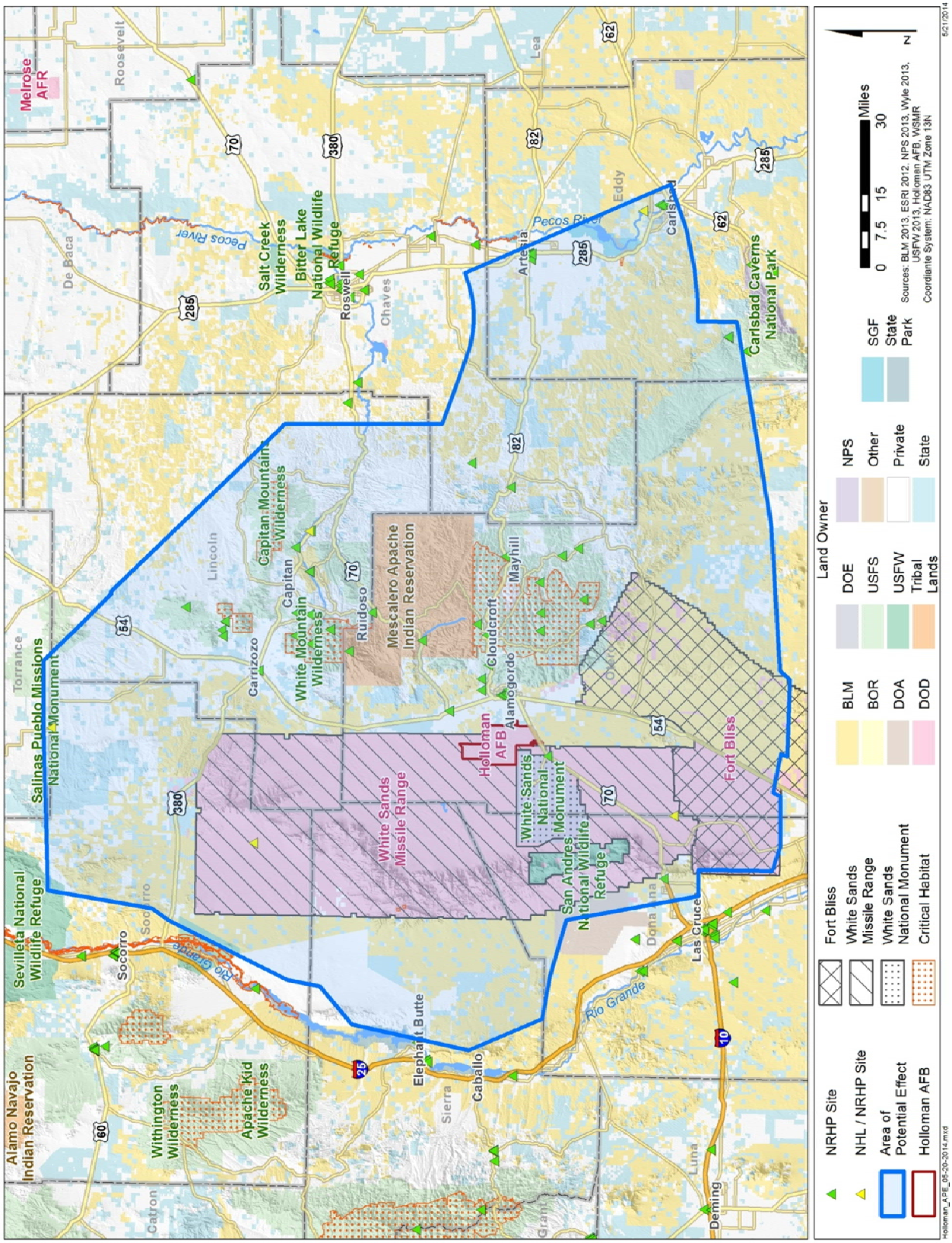

Figure 4-2. Area of Potential Effect for Holloman AFB Aircraft Operations

Table 4-4. Airspace Distributed Maximum L_{dnmr} for Baseline Scenario

Airspace Name	L_{dnmr} (dBA) Baseline
Beak MOAs and overlying ATCAAs	< 45
Pecos MOA	< 45
Cato MOA	< 45
Talon MOA	< 45
R-5107 (Red Rio)	50
R-5107 (Oscura)	50
R-5107 (Lava East/West)	50
R-5107 (Mesa East/West)	45
R-5107 (Yonder)	45
R-5103 (Centennnial)	50
R-5103 (McGregor)	50
Routes	**L_{dnmr} (dBA) Baseline**
VR-176	< 45
IR-133	52
IR-134	47
IR-142	51
IR-192	51
IR-194	51
IR-195	46

Visitor reaction to aircraft noise, based on surveys conducted at WHSA, is reported in *Mitigating the Effects of Military Aircraft Overflights on Recreational Users of Parks* (Miller 1999). Reaction was quantified in two ways: interference and annoyance. Two basic noise metrics were used: L_{eq} above ambient L_{eq} and the percent of time aircraft noise was audible. The ambient, which is described in Figures 7.1, 7.2 and 7.3 and Table 7.1 of that study, was as low as 22 dB. The report contains a number of plots presenting the dose-response relation between the two noise metrics and the two response measures. Figure 4-3 is Figure 7.5 of that study, showing the annoyance response as a function of percent time audible. The "sign up" and "sign down" points, black/white and white/black dots, respectively, divide the data into times when a sign informing visitors of aircraft activities was present. The sign had little effect on response. A key result seen in this Figure 4-3 is that there was no annoyance when time audible was below five percent. While time audible is not one of the metrics computed by DoD noise models, it is an important factor for the enjoyment of natural soundscapes. MR_NMAP provides total event time, which would approximate time audible. The total noise event time from the MR_NMAP analysis is one to two orders of magnitude less than this threshold. Subsonic noise from airspace operations therefore will not have an adverse effect on visitors at WHSA.

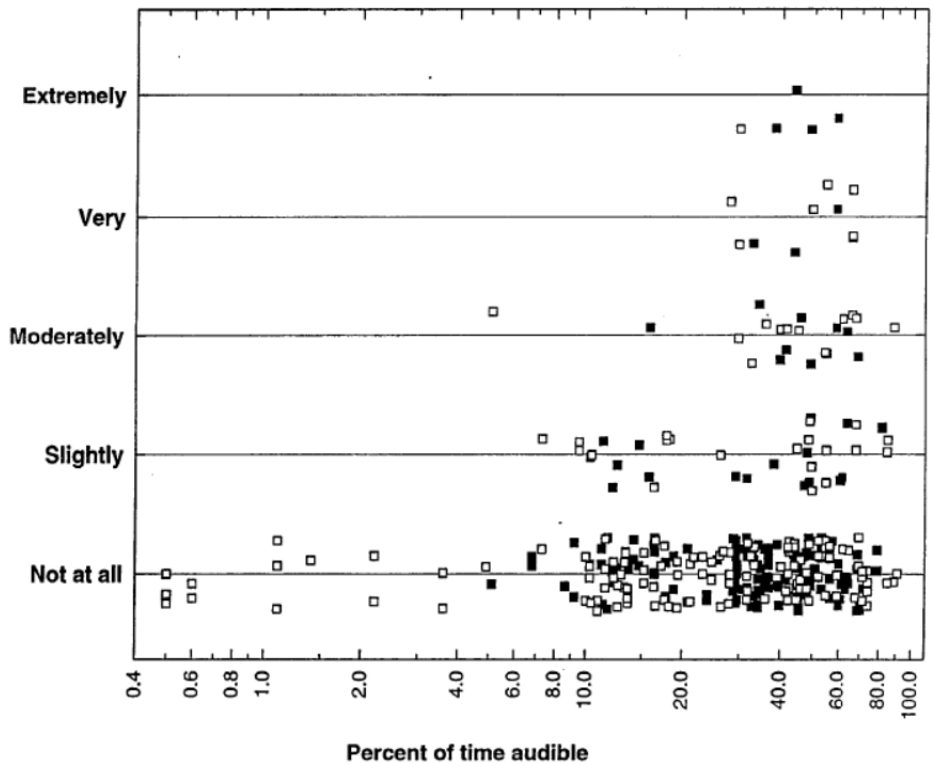

Figure 4-3. Annoyance versus Percent Time Aircraft Noise is Audible

4.2 Proposed Scenario

Proposed flight operations would be identical to Baseline except the QF-4 sorties would be replaced by QF-16 sorties (Swyt 2013b). Section 4.2.1 presents the airspace operations and modeled mission profiles. Section 4.2.2 describes the modeled areas and routes while Section 4.2.3 describes the airspace noise exposure levels in terms of the L_{dnmr} metric.

4.2.1 Operations

Proposed area-type airspace activity is summarized in Table 4-5. Since 380 QF-16 sorties will replace the QF-4 sorties on a one-for-one basis the total annual sorties would remain at 10,804. The 56th Fighter Wing detachment (56FW, DET) of F-16s would remain the most frequent user of the airspace with approximately 79 percent of sorties. Over 99 percent of sorties would continue to occur during the environmental daytime period.

The QF-16 would also replace the 34 QF-4 MTR sorties on a one-for-one basis so annual sorties would remain at 892 as presented in Table 4-6. Detailed tables are included in the appendix. The 56FW F-16s would continue to account for the majority of sorties and all MTR sorties would occur during the environmental daytime period.

4.2.2 Activity Areas

The QF-16 would utilize the same areas as the QF-4 it would replace, namely R-5107.

4.2.3 Noise Exposure

Using the data presented in Section 4.2.1 and 4.2.2, the L_{dnmr} levels were computed by MR_NMAP. No L_{dnmr} levels would reach or exceed 60 dB for the Proposed scenario so the results are presented in tabular format. Table 4-7 describes the distributed noise levels for each modeled area and MTR. The maximum level for area-type operations would be 50 dB L_{dnmr} which would occur in R-5103 primarily due to the 56FW F-16 CAS and SAT. The maximum MTR centerline level of 51 dB L_{dnmr} would occur along IR-133 as it ends in Red Rio primarily due to 56FW F-16 operations.

The POIs are exposed to 42 dB L_{dnmr} for all points except the West Trail which is exposed to 44 dB L_{dnmr}. At any given location in the airspace noise events will be heard on an average of about once a week. MR_NMAP does not directly provide the duration of noise events, but they are typically less than a minute or two.

The overall reduction in L_{dnmr} for the Proposed scenario is due to the QF-16 being as much as 10 dB lesser in SEL than the QF-4 it is replacing. The total noise event time from the MR_NMAP analysis is one to two orders of magnitude less than the threshold of five percent time audible. Subsonic noise from airspace operations would therefore continue to not have an adverse effect on visitors at WHSA.

Table 4-5. Modeled Subsonic Area-Type Operations for Proposed Scenario

Unit	Aircraft	R-5107			R-5103			Other Airspace			Total		
		Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total
82ATRS, DET 1	QF-16	250	-	250	40	-	40	90	-	90	380	-	380
82ATRS, DET 1	QF-4	-	-	-	-	-	-	-	-	-	-	-	-
96TG	T-38	127	-	127	9	-	9	67	-	67	203	-	203
96TG	C-12	14	-	14	3	-	3	8	-	8	25	-	25
56FW, DET 1	F-16	6,053	29	6,082	516	4	520	1,965	9	1,974	8,534	42	8,576
GAF FTS	Tornado	766	-	766	304	-	304	550	-	550	1,620	-	1,620
Totals		**7,210**	**29**	**7,239**	**872**	**4**	**876**	**2,680**	**9**	**2,689**	**10,762**	**42**	**10,804**

Notes:
(1) Includes Yonder, Lava, Mesa, Red Rio, and Oscura
(2) Includes Centenial and McGregor
(3) Includes Beak (A,B,C), Cowboy ATCAA, Talon and Pecos

Table 4-6. Modeled Subsonic Military Training Route Operations for Proposed Scenario

Unit	Aircraft	VR-176			IR-133			IR-142			IR-134			IR-195			IR-192			IR-194			Total		
		Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total
82ATRS, DET 1	QF-16	-	-	-	7	-	7	7	-	7	7	-	7	3	-	3	7	-	7	3	-	3	34	-	34
82ATRS, DET 1	QF-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96TG	T-38	25	-	25	18	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	43
96TG	C-12	3	-	3	3	-	3	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	8	-	8
56FW, DET 1	F-16	70	-	70	70	-	70	70	-	70	70	-	70	70	-	70	70	-	70	70	-	70	490	-	490
GAF FTS	Tornado	24	-	24	135	-	135	-	-	-	20	-	20	4	-	4	84	-	84	50	-	50	317	-	317
Totals		**122**	**-**	**122**	**233**	**-**	**233**	**77**	**-**	**77**	**98**	**-**	**98**	**77**	**-**	**77**	**162**	**-**	**162**	**123**	**-**	**123**	**892**	**-**	**892**

Table 4-7. Airspace-Distributed Maximum L_{dnmr} for Proposed Scenario

Airspace Name	L_{dnmr} (dBA)	
	Proposed	Change Re Baseline
Beak MOAs and overlying ATCAAs	< 45	0
Pecos MOA	< 45	0
Cato MOA	< 45	0
Talon MOA	< 45	0
R-5107 (Red Rio)	49	-1
R-5107 (Oscura)	50	0
R-5107 (Lava East/West)	49	-1
R-5107 (Mesa East/West)	< 45	-2
R-5107 (Yonder)	< 45	-1
R-5103 (Centennnial)	50	0
R-5103 (McGregor)	50	0
Routes	**L_{dnmr} (dBA)**	
	Proposed	**Change Re Baseline**
VR-176	< 45	0
IR-133	51	-1
IR-134	47	0
IR-142	49	-2
IR-192	51	0
IR-194	51	0
IR-195	45	-1

5.0 Special Use Airspace – Supersonic Activity

Holloman AFB maintains two waivers for supersonic activity below 30,000 ft MSL in the vicinity of WSMR. Supersonic activity is approved within WSMR via waiver between Flight Level 10,000 ft and 30,000 ft MSL (USAF 2011a) and above 30,000 ft MSL via AFI 13-201 *Airspace Management*. Additionally, a waiver (USAF 2011b) is maintained for supersonic activity within the low-level corridor depicted in Figure 5-2 between 300 ft AGL and 10,000 ft MSL (approximately 5,000 ft AGL). This section discusses the current and proposed supersonic activity and the potential for noise impacts.

5.1 Baseline Scenario

Section 5.1.1 presents the current supersonic operations, Section 5.1.2 describes the areas in which this activity occurs, and Section 5.1.3 discusses the resulting sound levels and potential for impacts.

5.1.1 Operations

Most supersonic activity at WSMR occurs at high altitudes above 10,000 ft MSL as detailed in Table 5-1. Of the 4,654 ACM sorties with potential to go supersonic, the 56FW F-16s account for 94 percent. Over 99 percent of all supersonic sorties occur during the environmental daytime (0700-2200). Only the 56FW F-16s conduct the few nighttime sorties (2200-0700). The BooMap model does not support environmental nighttime event input so these events were converted to the equivalent number of environmental daytime events by multiplying by a factor of 10.

Table 5-1. Annual High Altitude Potential Supersonic Sorties for Baseline Scenario

Unit	Aircraft	Airspace												Total		
		WSMR (R-5107)			Yonder			Lava			Mesa					
		Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-070)	Total	Day (0700-2200)	Night (2200-0700)	Total
82ATRS	QF-4	-	-	-	4	-	4	3	-	3	3	-	3	10	-	10
96TG	T-38	-	-	-	49	-	49	40	-	40	38	-	38	127	-	127
56FW-DET1	F-16	636	4	640	1,246	5	1,251	1,257	5	1,262	1,196	3	1,199	4,335	17	4,352
GAF	Tornado	165	-	165	-	-	-	-	-	-	-	-	-	165	-	165
Total		**801**	**4**	**805**	**1,299**	**5**	**1,304**	**1,300**	**5**	**1,305**	**1,237**	**3**	**1,240**	**4,637**	**17**	**4,654**

Source: 308th FS sortie analysis 1Jan10-31Dec11; LtCol Brian MacFarlane, 56FW/DET1; 7/1/2013
Notes: (1) IR-133/142, 134/195, 192/194

The current waiver for the low-level supersonic corridor identifies use by T-38B, F-16 and F-15 aircraft with up to 200 operations per year. The corridor is infrequently used by the Air Force with typically less than 10 operations per year and no use in recent years. Agreement with White Sand National Monument requires evacuation of the monument prior to use of the corridor. Such coordination is scheduled several weeks in advance. A typical supersonic "run" would setup over Mesa airspace at Flight level 30,000 ft MSL (FL300) and drop into the corridor flying southward. The aircraft would pull up to exit the corridor above 10,000 ft MSL (6,000 ft AGL) and typically well before the southern boundary of the corridor.

5.1.2 Activity Areas

Supersonic operations within airspace typically follow an elliptical pattern which is aligned with the "Available Airspace," or "Maneuver Ellipse." It is common for ACM arenas to have a single maneuver ellipse, with that region being the largest ellipse that can be inscribed within the airspace boundaries. Many supersonic areas have several maneuver ellipses, with operations divided among them. Based on guidance from the Holloman AFB (Lavarreda-Perez 2013), the four elliptical modeled flight areas depicted in Figure 5-1 represent the current supersonic flight activity in the vicinity of Holloman AFB. Aircraft activity within Yonder, Lava, and Mesa represent more localized operations within the named areas while the remaining supersonic operations which do not specifically apply to localized areas were modeled across the larger R-5107 airspace.

Low–level supersonic events occur in a corridor which runs approximately 75 miles north to south within R-5107 with a width varying from 10 to 20 miles as shown in Figure 5-2. The supersonic corridor terminates within the northwest portion of the White Sands National Monument area. Aircraft may conduct supersonic operations flying both to the north and to the south within the corridor.

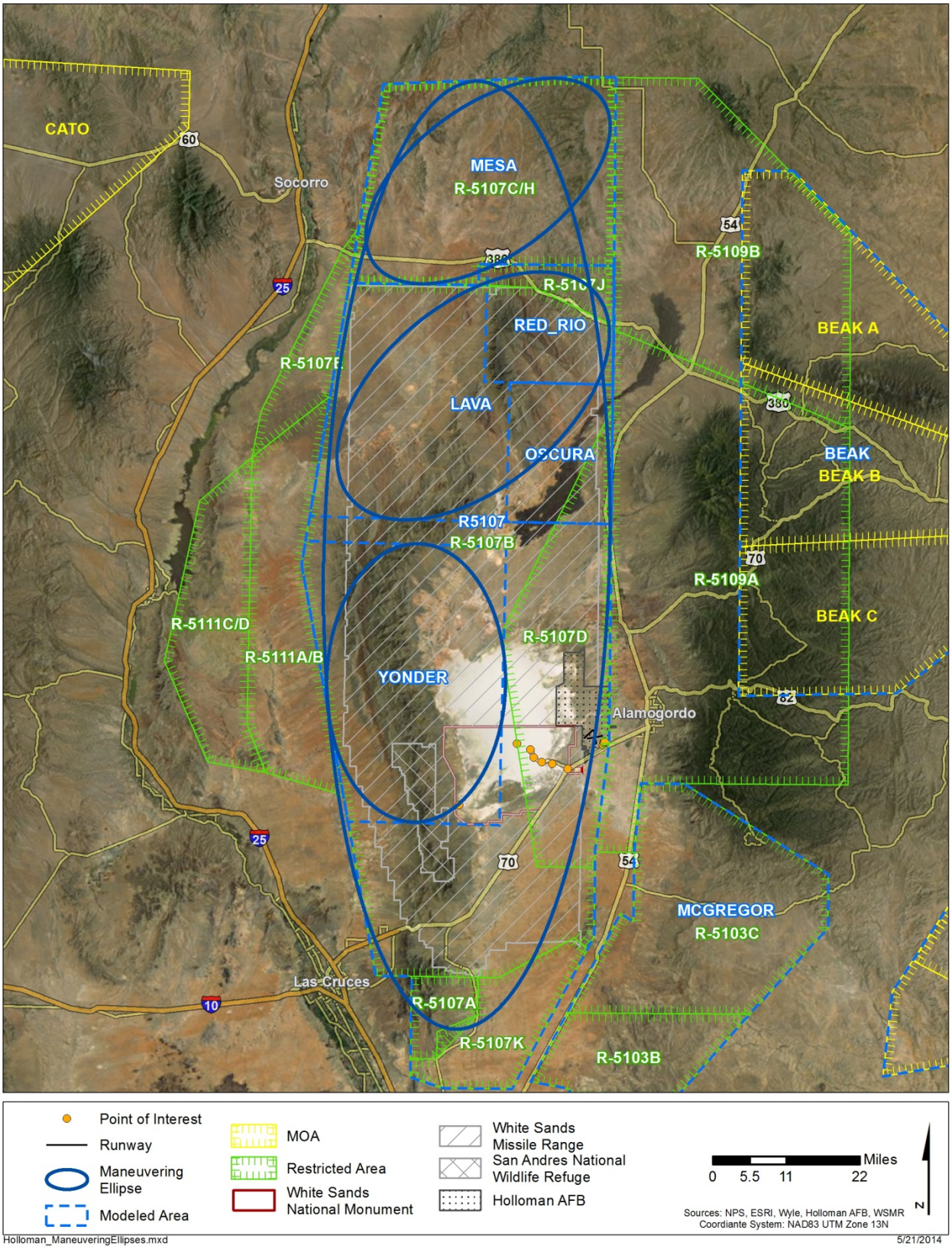

Figure 5-1. Manuver Ellipses for High-Altitude Supersonic Flight Areas

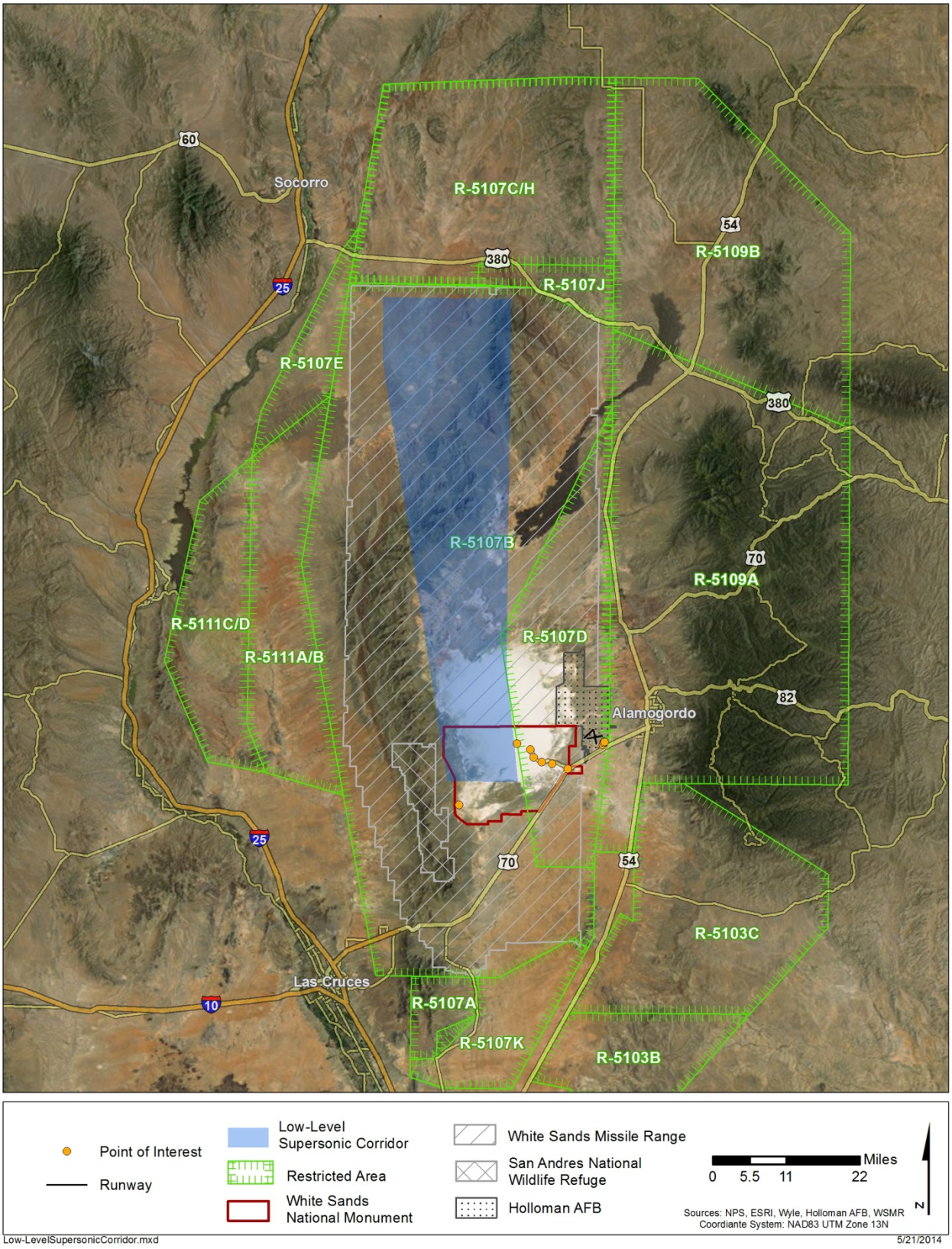

Figure 5-2. Low Level Supersonic Corridor

5.1.3 Noise Exposure

The high altitude supersonic activity described in 5.1.1 and 5.1.2 was modeled by BooMap. This model, based on measurements conducted at WSMR and several other supersonic airspaces, predicts the cumulative noise environment, CDNL, and the number of booms per day. Figures 5-3 and 5-4 depict the CDNL noise contours and the Booms per Month, respectively. The CDNL noise contour lines correspond to the modified-CHABA thresholds. CHABA is the Committee on Hearing and Bioacoutics which was formed under the National Academy of Sciences. DoD policy considers cumulative impulsive noise exposure, e.g. sonic booms, below 62 dB CDNL acceptable and not causing significant impact. Sonic booms from the QF-16 are comparable in magnitude and characteristic to the QF-4. Because the QF-16 operations would be the same as the QF-4, the cumulative sonic boom noise exposure for proposed action would be the same as baseline.

The boom environment in the center of R5107 is projected to be CDNL = 47.3 dB and 0.21 booms per day. The boom environment throughout R5107 is well below the 62 dB CDNL threshold and thus considered acceptable and not a significant impact. Booms vary in amplitude and type. Figure 5-5, taken from *Sonic Boom Environment Under a Supersonic Military Operating Area,* (Plotkin, et al. 1992), shows the probability distribution of boom peak amplitudes. This distribution includes carpet and focus booms. There is no visitor experience data for sonic booms that is comparable to that presented in *Mitigating the Effects of Military Aircraft Overflights on Recreational Users of Parks,* (Miller, et al. 1999), for subsonic booms, but at a rate of one boom every 5 days or less, disturbance is expected to be minimal.

A concern at WHSA is potential damage at the visitor center. The visitor center is a Southwest-Spanish-Pueblo style structure with thick adobe walls and a surface coating of cement-gunnite (King et al., 1988). Threshold criteria are presented in (Siskind et al., 1980) for structures exposed to impulsive noise. The criteria in (Siskind et al., 1980) are conservative, being the most restrictive in existence that are based on actual measurements (Siskind, 2005). Threshold criteria were identified in (Sutherland et al., 1990) for a range of unconventional structures, including adobe. During coordination for this project the NPS shared almost 50 reports which investigated the effect of sound and vibration on historic and archeological sites. The USAF reviewed and considered the findings of these studies. The NPS recently surveyed archeological sites of cultural importance within the WHSA dune field (Kurota, et al., 2012). The survey concluded that degradation of the archeological sites is overwhelmingly a product of natural forces.

Potential sonic boom damage is probabilistic, rather than deterministic, so that comparison with single value criteria does not quantify the risk involved. According to *Prediction Model for Impulsive Noise on Structures* (Plotkin, et al. 2012), a Probability of Damage (POD) model developed by Sutherland (Sutherland 2009) quantifies risk and the results are presented in Table 5-2 which shows POD, percent, computed from this method for N-wave booms from 1 to 10 psf. Note that probability becomes significant above 10 psf, consistent with the nominal 11 psf threshold identified by NASA (Clarkson and Mayes, 1972) for structures in good condition. Not all structures are in good condition, so there is a finite probability at lower levels.

A weighted average was taken between Table 5-2 and the boom probability distribution in Figure 5-5. The result is single event POD p = 0.00005064 percent per boom, or approximately one chance in 2 million. This analysis is somewhat conservative, for two reasons. One is that it is based on adobe, and does not account for the cement-gunnite surface coating. The second is that the POD values in Table 5-2 are all based on N-wave booms, while the higher amplitude booms are generally focus U-waves which have less energy than an N-wave of similar amplitude. The risk to the visitor center is thus very small.

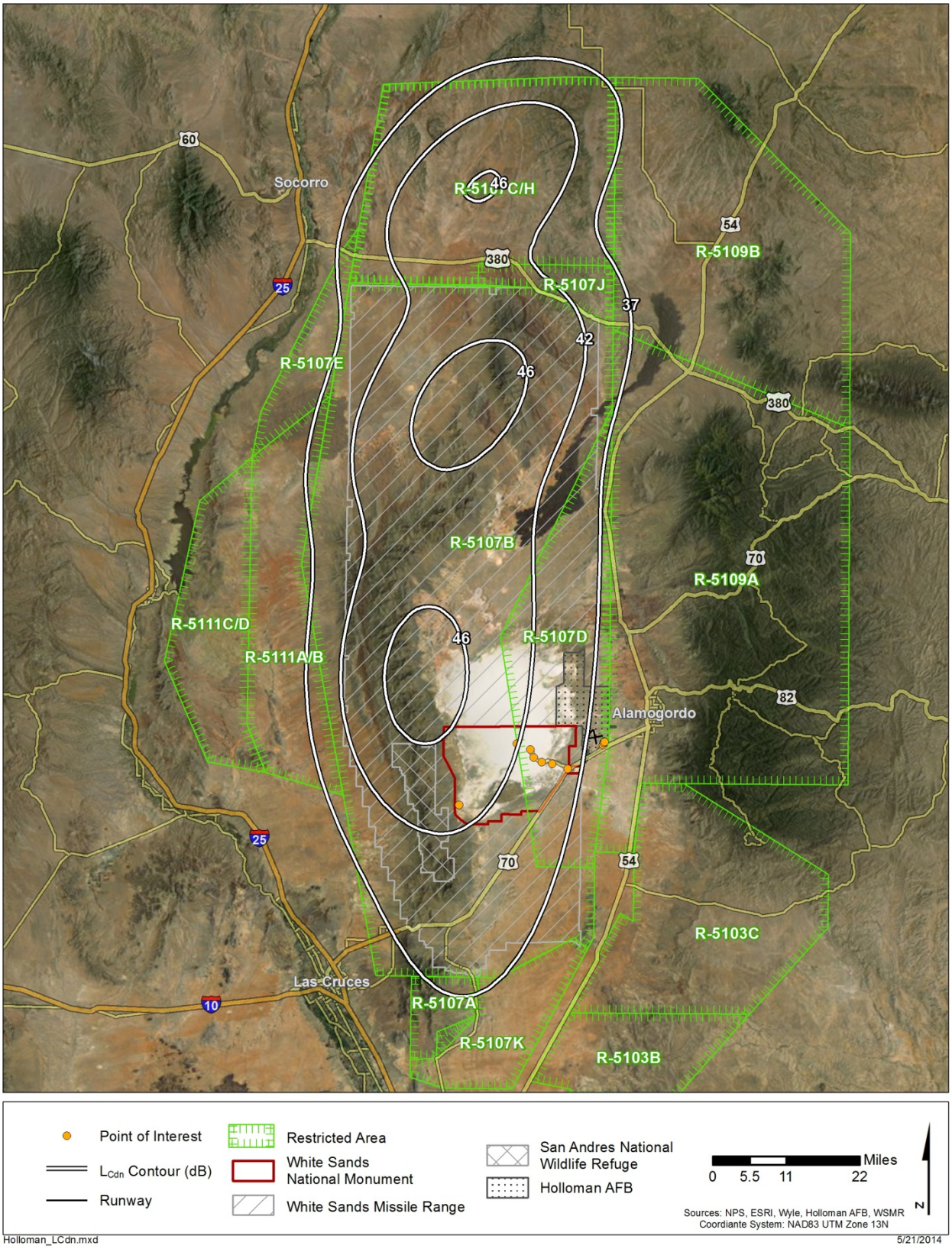

Figure 5-3. Cumulative Sonic Boom Noise Exposure (CDNL)

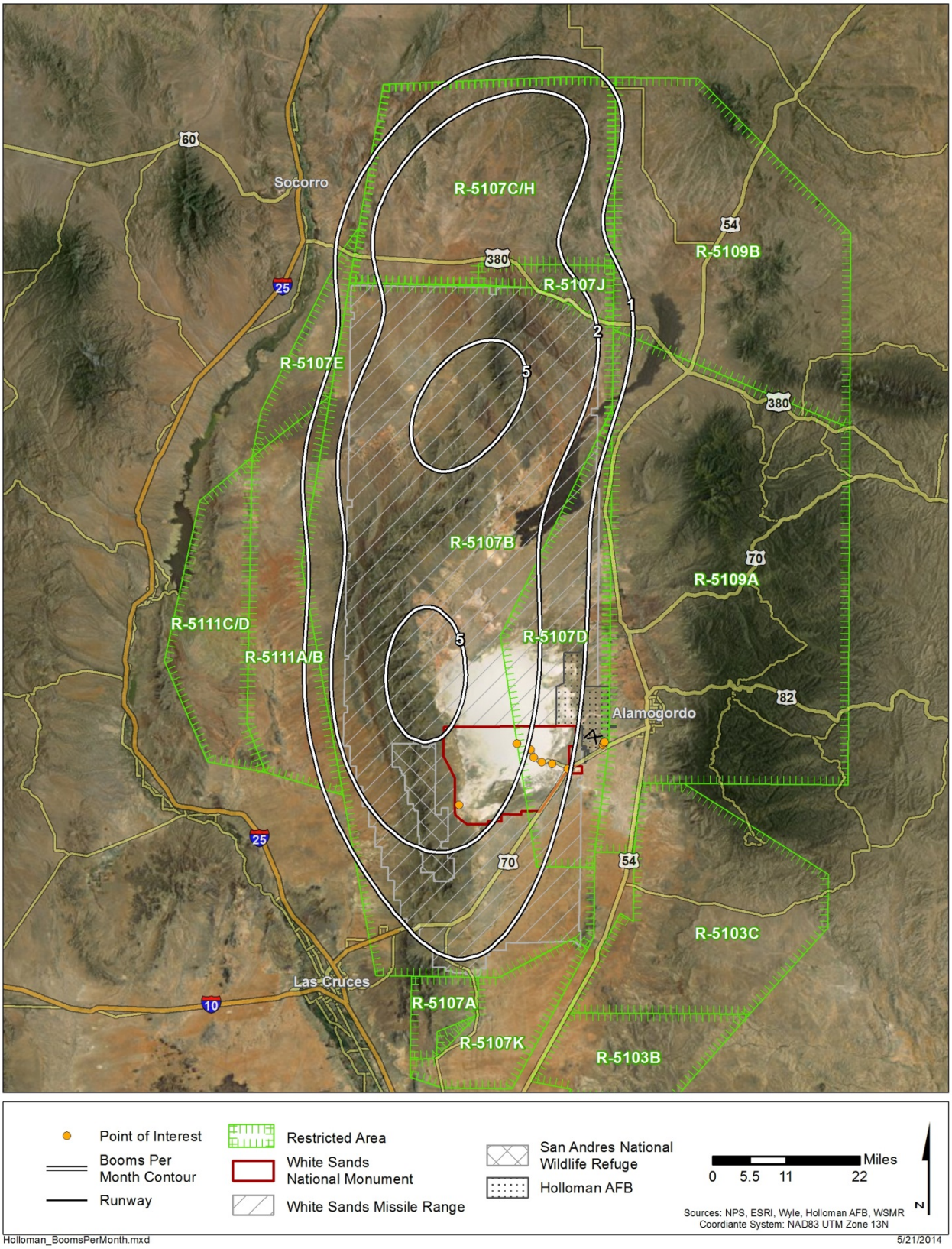

Figure 5-4. Sonic Booms per Month

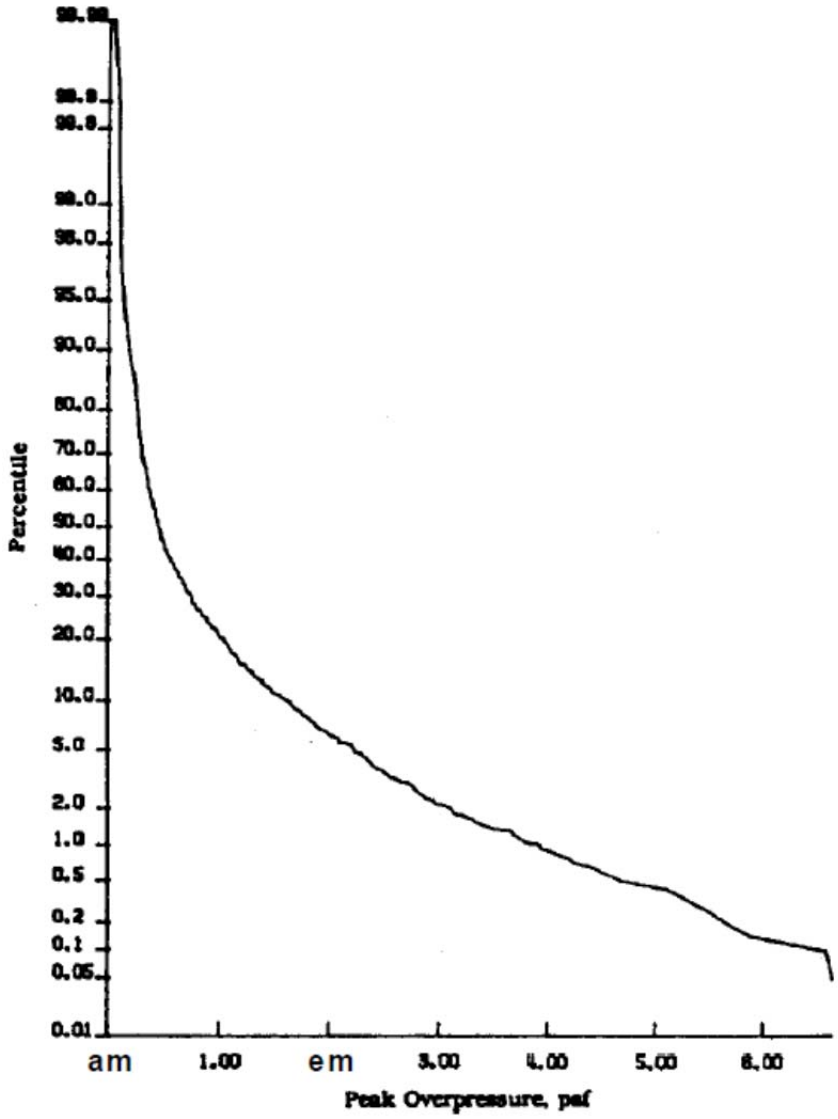

Figure 5-5. Cumulative Probability of Boom Amplitudes, psf, from High Altitude Supersonic Activity

Table 5-2. Quantified Risk Probability of Damage (POD) Model (Sutherland 2009)

Boom overpressure, psf	POD, percent, for adobe
1.00	0.00000004
2.00	0.00000312
3.00	0.00003559
4.00	0.00020000
5.00	0.00130000
6.00	0.00470000
7.00	0.01290000
8.00	0.02950000
9.00	0.05910000
10.00	0.10700000

In addition to the high altitude supersonic activity, there is the low altitude corridor. Sonic booms at low altitudes can be significant. Table 5-3 lists the peak overpressure for T-38, F-16 and F-15 aircraft at Mach 1.1 for several altitudes. Boom amplitudes were computed using the CABoom (Carlson, 1978) implementation of Carlson's simplified sonic boom model. Local ground elevation near White Sands National Monument is approximately 4,000 ft MSL. Therefore 4,300 ft MSL corresponds to 300 ft AGL.

Table 5-3. Sonic Boom Overpressure, psf, for Low Altitude Flight (Under track)

Altitude, ft MSL	T-38	F-16	F-15
4,300	31.1	42.6	51.2
5,000	14.7	19.4	23.7
6,000	9.3	12.1	14.8
7,000	7.0	9.1	11.1
8,000	5.7	7.3	9.0
9,000	4.8	6.2	7.6
10,000	4.2	5.4	6.6

The overpressures in Table 5-3 represent exposure directly under the flight path. Qualitative descriptions of sonic boom effect are summarized in Table 5-4. The overpressures are sufficiently high that personnel and non-range equipment should not be exposed. Accordingly, when there are operations that can result in low altitude booms at WHSA, they will be coordinated with NPS and the monument will be evacuated, per the Interagency Agreement No. F1274100002. The visitor center is approximately 8 miles due east of the eastern edge of the corridor and 14 miles from the corridor centerline and thus beyond the sonic boom cutoff. Therefore the visitor center is well outside of the area exposed to booms from the low level corridor.

Table 5-4. Sonic Boom Overpressure Effects Summary

Peak Overpressure		Effects Summary
dB	psf	
0 - 127	0 - 1	No damage to structures No significant reaction
127 - 131	1.0 - 1.5	Rare minor damage Some public reaction
131 - 140	1.5 - 4.0	Window damage possible Increasing public reaction – particularly at night
140 - 146	4.0 - 8.0	Incipient damage to structures
146 - 171	8.0 - 144	Measured booms at minimum altitudes experienced by humans: no injury
185	720	Estimated threshold for eardrum rupture (maximum overpressure)
194	2160	Estimated threshold for lung damage (maximum overpressure)

Source: USAF 1984

5.2 Proposed Scenario

The Proposed scenario would replace all QF-4 supersonic operations with QF-16 on a one-for-one basis. Section 5.2.1 presents the proposed supersonic operations, Section 5.2.2 describes the areas in which this activity occurs, and Section 5.2.3 discusses the resulting sound levels and potential for impacts.

5.2.1 Operations

Since the only change in the Proposed scenario is the replacement of the QF-4 operations with the QF-16, the total annual supersonic sorties would remain at 4,654, as detailed in Table 5-3 detailed. The supersonic sorties by all other aircraft types would remain unchanged.

5.2.2 Activity Areas

The QF-16 would utilize the same elliptical flight areas as the QF-4 it is replacing so there would be no changes to the flight areas relative to Baseline.

5.2.3 Noise Exposure

The high altitude supersonic activity described in 5.2.1 and 5.2.2 was modeled by BooMap. BooMap handles both the F-4 and the F-16 (surrogates modeled to represent the QF-4 and QF-16) as equivalent in its computation because differences in the sonic boom characteristics between the two were too small to justify unique treatment. Therefore, the resulting CDNL contours and booms per month plots would be identical for both Baseline and Proposed scenarios as depicted in Figures 5-3 and 5-4. The boom environment in the center of R5107 would remain at a CDNL = 47.3 dB and 0.21 booms per day. Consistent with Baseline, at a rate of one boom every 5 days or less, disturbance is expected to remain minimal. The cumulative sonic boom exposure would be below 62 dB CDNL throughout R5107 and therefore acceptable, not causing significant impact.

The total low altitude supersonic operations along the corridor will not change relative to baseline and the replacement of the QF-4 with the QF-16 would create no appreciable difference in noise levels. The visitor center would remain well outside of the area exposed to booms from the corridor supersonic activity.

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Appendix A – Engine Run-up and Airspace Profiles

Table A-1. Modeled Pre-flight Engine Run-ups at Holloman AFB for Baseline Scenario

		Location			Run-up Profile									
								Average Daily Events		Engine		Duration of Each Event		# of Engines Running Each Event
Aircraft	Engine Type	ID	Description	Magnetic Heading (degrees)	ID	Description	Notes	Day (0700-2200)	Night (2200-0700)	Power	Unit	Min	Sec	
F-16C	F100-PW-220	ER16	Dep End of RWY 16	160	F16_TO_RW16	Takeoff Position Run-up on RWY 16		4.53	0	80	% NC	0	15	1
		ER25	Dep End of RWY 25	250	F16_TO_RW25	Takeoff Position Run-up on RWY 25		36.64	0	80	% NC	0	15	1
QF-4	J79-GE-15/15E	ER16	Dep End of RWY 16	160	4E16	Takeoff Position Run-up on RWY 16		0.163	0	65	% RPM	10	0	2
										85	% RPM	0	20	2
		ER22	Dep End of RWY 22		4E22	end of runway		0.076		65	% RPM	10	0	2
										85	% RPM	0	20	2
		ER25	Dep End of RWY 25	250	4E25	Takeoff Position Run-up on RWY 25		2.095	0	65	% RPM	10	0	2
										85	% RPM	0	20	2
		ER34	Dep End of RWY 34	340	4E34	Takeoff Position Run-up on RWY 34		0.0698	0	65	% RPM	10	0	2
										85	% RPM	0	20	2
T-38	J85-GE-5A	ER16	Dep End of RWY 16	160	3E16	Takeoff Position Run-up on RWY 16		0.56	0	100	% RPM	0	7	2
		ER25	Dep End of RWY 25	250	3E25	Takeoff Position Run-up on RWY 25		10.10	0	100	% RPM	0	7	2
		ER34	Dep End of RWY 34	340	3E34	Takeoff Position Run-up on RWY 34		0.56	0	100	% RPM	0	7	2
		T38A		320	T3PD	warmup cooldown	idle power	22.46	0	48	% RPM	4	0	2
Tornado	RB 199-34R-04	ER25	Dep End of RWY 25	250	TE25	Takeoff Position Run-up on RWY 25		25.55	0.935	65	% RPM	10	0	2
		ER34	Dep End of RWY 34	340	TE34	Takeoff Position Run-up on RWY 34		1.35	0.049	65	% RPM	10	0	2
		TORA	Ramp Spot?	230	TAPD	warmup		13.45	0.49	65	% RPM	15	0	2
		TORB	Ramp Spot?	230	TBPD	warmup		13.45	0.49	65	% RPM	15	0	2

Table A-2. Modeled Maintenance Engine Run-ups at Holloman AFB for Baseline Scenario

		Location			Run-up Profile										
								Average Daily Events		Engine		Duration of Each Event		# of Engines Running Each Event
Aircraft	Engine Type	ID	Description	Magnetic Heading (degrees)	ID	Description	Notes	Day (0700-2200)	Night (2200-0700)	Power	Unit	Min	Sec	
F-16C	F100-PW-220	16_HH	Trim Pad	80	F16_TRIM	ops check	1-2/wk for 2 squadrons	0.05	0.00	67	% NC	10	0	1
										80	% NC	10	5	1
										85	% NC	5	0	1
						fuel or oil flux, ECS surge; training class	2/mo for 2 squadrons	0.10	0.00	67	% NC	25	0	1
										80	% NC	5	5	1
										91.5	% NC	2	0	1
										Max AB		3	0	1
		16_LOPWR1	flight line - centroid of southern 1/2 of flightline Mx activity	80	F16_LOPWR1_1	oil consumption, APU check	1/wk for 2 squadrons;	0.10	0.00	67	% NC	10	0	1
										80	% NC	2	30	1
		16_LOPWR2	flight line - centroid of northern 1/2 of flightline Mx activity	260	F16_LOPWR2_1	oil consumption, APU check	1/wk for 2 squadrons;	0.10	0.00	67	% NC	10	0	1
										80	% NC	2	30	1
		16_LOPWR1	flight line - centroid c	80	F16_LOPWR1_2	flight controls and engine change	4/wk for 2 squdrons	0.40	0.00	67	% NC	15	0	1
		16_LOPWR2	flight line - centroid c	260	F16_LOPWR2_2	flight controls and engine change	4/wk for 2 squdrons	0.40	0.00	67	% NC	15	0	1
		16_HH	Hush House	45	F16_HUSH	in-frame run; ops check	4/wk for 2 squadrons	0.76	0.04	80	% RPM	50	0	1
										91.5	% RPM	13	0	1
										Max AB		2	0	1
						out of frame run; fuel flow, etc.	1.5/wk for 2 squadrons	0.30	0.00	68	% RPM	38	0	1
										75	% RPM	6	5	1
										Max AB		5	30	1
										92	% RPM	13	0	1
										Max AB		2	0	1
QF-4	J79-GE-15/15E	QF4B	Trim Pad	40	QF4B	assorted checks, A/B leaks, instrument calibration		0.10	0.00	65	% RPM	15	0	1
										85	% RPM	2	30	1
										Max AB		2	30	1
		QF4A	QF Parking Spot	200	QF4A_1 and _2	routine engine runs		0.60	0.00	65	% RPM	10	0	1
										80	% RPM	2	30	1
TORNADO	RB 199-34R-04 (in frame)	HH2		150	TORH		all op types combined	1.00	0.00	65	% RPM	0	15	1
										85	% RPM	7	8	1
										100	% RPM	1	36	1
										Max Reheat		4	52	1
		TORA		230	TORA	ramp ops split between 2 spots	all ops combined	0.55	0.00	65	% RPM	15	0	1
										80	% RPM	4	0	1
		TORB		230	TORB	ramp ops split between 2 spots	all ops combined	0.55	0.00	65	% RPM	15	0	1
										80	% RPM	4	0	1
T-38	J85-GE-5A	T38A		320	T38R		all ops combined	1.00	0.00	48	% RPM	164	52	1
										80	% RPM	0	38	1
	J85-GE-5A w/ suppressor AF32A-18	HH3		90	T38T		all op-types combined into minutes at X power per day	0.089	0.00	48	% RPM	6	0	1
										88	% RPM	9	6	1
										99.5	% RPM	9	9	1
										Max AB		5	48	1

Table A-3. Modeled Pre-flight Engine Run-ups at Holloman AFB for Proposed Scenario

		Location			Run-up Profile									
								Average Daily Events		Engine		Duration of Each Event		# of Engines Running Each Event
Aircraft	Engine Type	ID	Description	Magnetic Heading (degrees)	ID	Description	Notes	Day (0700-2200)	Night (2200-0700)	Power	Unit	Min	Sec	
F-16C	F100-PW-220	ER16	Dep End of RWY 16	160	F16_TO_RW16	Takeoff Position Run-up on RWY 16		4.53	0	80	% NC	0	15	1
		ER25	Dep End of RWY 25	250	F16_TO_RW25	Takeoff Position Run-up on RWY 25		36.64	0	80	% NC	0	15	1
QF-16	F100-PW-220	ER16	Dep End of RWY 16	160	QF16_TO_RW16	TAKEOFF ROLL RUNUP AT 80% EACH DEPARTURE	Excludes unmanned drones	0.0698	0	80	% NC	0	15	1
		ER22	Dep End of RWY 22	220	QF16_TO_RW22	TAKEOFF ROLL RUNUP AT 80% EACH DEPARTURE	Excludes unmanned drones	0.1924	0	80	% NC	0	15	1
		ER25	Dep End of RWY 25	250	QF16_TO_RW25	TAKEOFF ROLL RUNUP AT 80% EACH DEPARTURE	Excludes unmanned drones	2.095	0	80	% NC	0	15	1
		ER34	Dep End of RWY 34	340	QF16_TO_RW34	TAKEOFF ROLL RUNUP AT 80% EACH DEPARTURE	Excludes unmanned drones	0.0466	0	80	% NC	0	15	1
T-38	J85-GE-5A	ER16	Dep End of RWY 16	160	3E16	Takeoff Position Run-up on RWY 16		0.56	0	100	% RPM	0	7	2
		ER25	Dep End of RWY 25	250	3E25	Takeoff Position Run-up on RWY 25		10.10	0	100	% RPM	0	7	2
		ER34	Dep End of RWY 34	340	3E34	Takeoff Position Run-up on RWY 34		0.56	0	100	% RPM	0	7	2
		T38A		320	T3PD	warmup cooldown	idle power	22.46	0	48	% RPM	4	0	2
Tornado	RB 199-34R-04	ER25	Dep End of RWY 25	350	TE25	Takeoff Position Run-up on RWY 25		25.55	0.935	65	% RPM	10	0	2
		ER34	Dep End of RWY 34	340	TE34	Takeoff Position Run-up on RWY 34		1.35	0.049	65	% RPM	10	0	2
		TORA	Ramp Spot?	230	TAPD	warmup		13.45	0.49	65	% RPM	15	0	2
		TORB	Ramp Spot?	230	TBPD	warmup		13.45	0.49	65	% RPM	15	0	2

Table A-4. Modeled Maintenance Engine Run-ups at Holloman AFB for Proposed Scenario

Aircraft	Engine Type	ID	Description	Magnetic Heading (degrees)	ID	Description	Notes	Average Daily Events		Engine		Duration of Each Event		# of Engines Running Each Event
								Day (0700-2200)	Night (2200-0700)	Power	Unit	Min	Sec	
F-16C	F100-PW-220	16_HH	Trim Pad	80	F16_TRIM	ops check	1-2/wk for 2 squadrons	0.05	0.00	67	% NC	10	0	1
										80	% NC	10	5	1
										85	% NC	5	0	1
						fuel or oil flux, ECS surge; training class	2/mo for 2 squadrons	0.10	0.00	67	% NC	25	0	1
										80	% NC	5	5	1
										91.5	% NC	2	0	1
										Max AB		3	0	1
		16_LOPWR1	flight line -	80	F16_LOPWR1_1	oil consumption, APU check	1/wk for 2 squadrons;	0.10	0.00	67	% NC	10	0	1
			centroid of southern 1/2 of flightline Mx activity							80	% NC	2	30	1
		16_LOPWR2	flight line -	260	F16_LOPWR2_1	oil consumption, APU check	1/wk for 2 squadrons;	0.10	0.00	67	% NC	10	0	1
			centroid of northern 1/2 of flightline Mx activity							80	% NC	2	30	1
		16_LOPWR1	flight line - centroid c	80	F16_LOPWR1_2	flight controls and engine change	4/wk for 2 squdrons	0.40	0.00	67	% NC	15	0	1
		16_LOPWR2	flight line - centroid c	260	F16_LOPWR2_2	flight controls and engine change	4/wk for 2 squdrons	0.40	0.00	67	% NC	15	0	1
		16_HH	Hush House	45	F16_HUSH	in-frame run; ops check	4/wk for 2 squadrons	0.76	0.04	80	% RPM	50	0	1
										91.5	% RPM	13	0	1
										Max AB		2	0	1
						out of frame run; fuel flow, etc.	1.5/wk for 2 squadrons	0.30	0.00	68	% RPM	38	0	1
										75	% RPM	6	5	1
										Max AB		5	30	1
										92	% RPM	13	0	1
QF-16	F100-PW-220	QF-16 Trim Pad	Trim Pad	30	QF-16_TRIM	assorted checks/fuel control/AB checks	1-2/wk for 2 squadrons	0.10	0.00	67	%NC	15	0	1
										80	% NC	2	30	1
										Max AB		2	30	1
		QF16A	QF Parking Spot	130	QF16_Pkg	oil consumption, APU check	1.5/wk for 2 squadrons	0.30	0.00	67	% NC	10	0	1
										80	% NC	2	30	1
				260	QF-16-QF4A Pkg	oil consumption, APU check	1.5/wk for 2 squadrons	0.10	0.00	67	% NC	10	0	1
										80	% NC	2	30	1
TORNADO	RB 199-34R-04 (in frame)	HH2		150	TORH		all op types combined	1.00	0.00	65	% RPM	0	15	1
										85	% RPM	7	8	1
										100	% RPM	1	36	1
										Max Reheat		4	52	1
		TORA	Ramp Spot?	230	TORA	ramp ops split between 2 spots	all ops combined	0.55	0.00	65	% RPM	15	0	1
										80	% RPM	4	0	1
		TORB	Ramp Spot?	230	TORB	ramp ops split between 2 spots	all ops combined	0.55	0.00	65	% RPM	15	0	1
										80	% RPM	4	0	1
T-38	J85-GE-5A			320	T38R		all ops combined	1.00	0.00	48	% RPM	164	52	1
										80	% RPM	0	38	1
	J85-GE-5A w/ suppressor AF32A-18	HH3		90	T38T		all op-types combined into minutes at X power per day	0.089	0.00	48	% RPM	6	0	1
										88	% RPM	9	6	1
										99.5	% RPM	9	9	1
										Max AB		5	48	1

Table A-5. Subsonic Airspace Operations for Baseline Scenario

Unit	Aircraft Type	Mission Type	Beak A,B,C Cowboy ATCAA			Talon			Pecos			Cato			R-5103						R-5107																					Area Totals		
															McGregor			Centennial			Other			Yonder			Lava			Mesa			Red Rio			Oscura								
			Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Annual Total
82ATRS, DET 1	QF-4	Basics	20	-	20	70	-	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	3	-	3	3	-	3	-	-	-	-	-	-	100	-	100
		WSMR Test	-	-	-	-	-	-	-	-	-	-	-	-	40	-	40	-	-	-	240	-	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	280
		Subtotal	20	-	20	70	-	70	-	-	-	-	-	-	40	-	40	-	-	-	240	-	240	4	-	4	3	-	3	3	-	3	-	-	-	-	-	-	380	-	380
96TG	T-38		56	-	56	11	-	11	-	-	-	-	-	-	4	-	4	5	-	5	-	-	-	49	-	49	40	-	40	38	-	38	-	-	-	-	-	-	203	-	203
	C-12 (1)		-	-	-	8	-	8	-	-	-	-	-	-	-	-	-	3	-	3	-	-	-	5	-	5	5	-	5	4	-	4	-	-	-	-	-	-	25	-	25
		Subtotal	56	-	56	19	-	19	-	-	-	-	-	-	4	-	4	8	-	8	-	-	-	54	-	54	45	-	45	42	-	42	-	-	-	-	-	-	228	-	228
56FW, DET 1	F-16	Basics	199	2	200	199	2	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	199	2	200	199	2	200	191	1	192	-	-	-	-	-	-	985	7	992
		BSA	60	0	60	60	0	60	-	-	-	-	-	-	-	-	-	199	2	200	-	-	-	99	1	100	99	1	100	50	0	50	433	3	436	466	4	470	1,465	11	1,476
		CAS	-	-	-	20	0	20	-	-	-	-	-	-	-	-	-	119	1	120	-	-	-	40	0	40	20	0	20	-	-	-	99	1	100	-	-	-	298	2	300
		TI	298	2	300	298	2	300	-	-	-	-	-	-	-	-	-	-	-	-	298	2	300	298	2	300	337	3	340	320	2	322	-	-	-	-	-	-	1,848	14	1,862
		BFM	200	-	200	200	-	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	-	400	400	-	400	400	-	400	-	-	-	-	-	-	1,600	-	1,600
		ACM	150	-	150	100	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	-	150	150	-	150	150	-	150	-	-	-	-	-	-	700	-	700
		ACT	24	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	-	140	100	-	100	72	-	72	76	-	76	-	-	-	-	-	-	412	-	412
		SAT	60	0	60	60	0	60	-	-	-	-	-	-	-	-	-	199	2	200	199	2	200	99	1	100	99	1	100	60	0	60	199	2	200	-	-	-	973	7	980
		LASDT	-	-	-	40	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	100	100	-	100	14	-	14	-	-	-	-	-	-	254	-	254
		Subtotal	989	5	994	975	5	980	-	-	-	-	-	-	-	-	-	516	4	520	636	4	640	1,484	6	1,490	1,476	6	1,482	1,259	5	1,264	730	6	736	466	4	470	8,534	42	8,576
GAF FTS	Tornado	Basics	286	-	286	52	-	52	-	-	-	-	-	-	-	-	-	59	-	59	102	-	102	42	-	42	17	-	17	7	-	7	2	-	2	1	-	1	568	-	568
		BSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	60	-	60
		CAS	2	-	2	3	-	3	9	-	9	-	-	-	-	-	-	187	-	187	75	-	75	2	-	2	8	-	8	1	-	1	13	-	13	-	-	-	300	-	300
		BFM	4	-	4	50	-	50	-	-	-	-	-	-	-	-	-	4	-	4	70	-	70	69	-	69	24	-	24	14	-	14	-	-	-	1	-	1	236	-	236
		ACM	1	-	1	44	-	44	9	-	9	-	-	-	-	-	-	-	-	-	80	-	80	43	-	43	17	-	17	17	-	17	-	-	-	-	-	-	211	-	211
		ACT	1	-	1	39	-	39	-	-	-	-	-	-	-	-	-	-	-	-	63	-	63	10	-	10	7	-	7	6	-	6	-	-	-	-	-	-	126	-	126
		SAT	16	-	16	3	-	3	7	-	7	-	-	-	-	-	-	22	-	22	41	-	41	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	90	-	90
		Refuel	24	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	29
		Subtotal	334	-	334	191	-	191	25	-	25	-	-	-	-	-	-	304	-	304	436	-	436	167	-	167	73	-	73	45	-	45	15	-	15	30	-	30	1,620	-	1,620
Grand Totals			1,399	5	1,404	1,255	5	1,260	25	-	25	-	-	-	44	-	44	828	4	832	1,312	4	1,316	1,709	6	1,715	1,597	6	1,603	1,349	5	1,354	745	6	751	496	4	500	10,762	42	10,804

Notes: (1) Not Modeled

Table A-6. Subsonic Airspace Operations for Proposed Scenario

Unit	Aircraft Type	Mission Type	Beak A,B,C Cowboy ATCAA			Talon			Pecos			R-5103						R-5107																		Area Totals		
												McGregor			Centennial			WSMR (not in any specific sub area)			Yonder			Lava			Mesa			Red Rio			Oscura					
			Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Annual Total
82ATRS, DET 1	QF-16	Basics	20	-	20	70	-	70	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	3	-	3	3	-	3	-	-	-	-	-	-	100	-	100
		WSMR Test	-	-	-	-	-	-	-	-	-	40	-	40	-	-	-	240	-	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	280
		Subtotal	20	-	20	70	-	70	-	-	-	40	-	40	-	-	-	240	-	240	4	-	4	3	-	3	3	-	3	-	-	-	-	-	-	380	-	380
96TG	T-38		56	-	56	11	-	11	-	-	-	4	-	4	5	-	5	-	-	-	49	-	49	40	-	40	38	-	38	-	-	-	-	-	-	203	-	203
	C-12 (1)		-	-	-	8	-	8	-	-	-	-	-	-	3	-	3	-	-	-	5	-	5	5	-	5	4	-	4	-	-	-	-	-	-	25	-	25
		Subtotal	56	-	56	19	-	19	-	-	-	4	-	4	8	-	8	-	-	-	54	-	54	45	-	45	42	-	42	-	-	-	-	-	-	228	-	228
56FW, DET 1	F-16	Basics	199	2	200	199	2	200	-	-	-	-	-	-	-	-	-	-	-	-	199	2	200	199	2	200	191	1	192	-	-	-	-	-	-	985	7	992
		BSA	60	0	60	60	0	60	-	-	-	-	-	-	199	2	200	-	-	-	99	1	100	99	1	100	50	0	50	433	3	436	466	4	470	1,465	11	1,476
		CAS	-	-	-	20	0	20	-	-	-	-	-	-	119	1	120	-	-	-	40	0	40	20	0	20	-	-	-	99	1	100	-	-	-	298	2	300
		TI	298	2	300	298	2	300	-	-	-	-	-	-	-	-	-	298	2	300	298	2	300	337	3	340	320	2	322	-	-	-	-	-	-	1,848	14	1,862
		BFM	200	-	200	200	-	200	-	-	-	-	-	-	-	-	-	-	-	-	400	-	400	400	-	400	400	-	400	-	-	-	-	-	-	1,600	-	1,600
		ACM	150	-	150	100	-	100	-	-	-	-	-	-	-	-	-	-	-	-	150	-	150	150	-	150	150	-	150	-	-	-	-	-	-	700	-	700
		ACT	24	-	24	-	-	-	-	-	-	-	-	-	-	-	-	140	-	140	100	-	100	72	-	72	76	-	76	-	-	-	-	-	-	412	-	412
		SAT	60	0	60	60	0	60	-	-	-	-	-	-	199	2	200	199	2	200	99	1	100	99	1	100	60	0	60	199	2	200	-	-	-	973	7	980
		LASDT	-	-	-	40	-	40	-	-	-	-	-	-	-	-	-	-	-	-	100	-	100	100	-	100	14	-	14	-	-	-	-	-	-	254	-	254
		Subtotal	989	5	994	975	5	980	-	-	-	-	-	-	516	4	520	636	4	640	1,484	6	1,490	1,476	6	1,482	1,259	5	1,264	730	6	736	466	4	470	8,534	42	8,576
GAF FTS	Tornado	Basics	286	-	286	52	-	52	-	-	-	-	-	-	59	-	59	102	-	102	42	-	42	17	-	17	7	-	7	2	-	2	1	-	1	568	-	568
		BSA	-	-	-	-	-	-	-	-	-	-	-	-	32	-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	60	-	60
		CAS	2	-	2	3	-	3	9	-	9	-	-	-	187	-	187	75	-	75	2	-	2	8	-	8	1	-	1	13	-	13	-	-	-	300	-	300
		BFM	4	-	4	50	-	50	-	-	-	-	-	-	4	-	4	70	-	70	69	-	69	24	-	24	14	-	14	-	-	-	1	-	1	236	-	236
		ACM	1	-	1	44	-	44	9	-	9	-	-	-	-	-	-	80	-	80	43	-	43	17	-	17	17	-	17	-	-	-	-	-	-	211	-	211
		ACT	1	-	1	39	-	39	-	-	-	-	-	-	-	-	-	63	-	63	10	-	10	7	-	7	6	-	6	-	-	-	-	-	-	126	-	126
		SAT	16	-	16	3	-	3	7	-	7	-	-	-	22	-	22	41	-	41	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	90	-	90
		Refuel	24	-	24	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	29
		Subtotal	334	-	334	191	-	191	25	-	25	-	-	-	304	-	304	436	-	436	167	-	167	73	-	73	45	-	45	15	-	15	30	-	30	1,620	-	1,620
Grand Totals			1,399	5	1,404	1,255	5	1,260	25	-	25	44	-	44	828	4	832	1,312	4	1,316	1,709	6	1,715	1,597	6	1,603	1,349	5	1,354	745	6	751	496	4	500	10,762	42	10,804

Notes: (1) Not Modeled

Table A-7. Subsonic MTR Sorties for Baseline Scenario

Unit	Aircraft Type	Mission Type	VR-176			IR-133			IR-142			IR-134			IR-195			IR-192			IR-194			MTR Totals		
			Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Annual Total
82ATRS, DET 1	QF-4	Basics	-	-	-	7.0	-	7.0	7.0	-	7.0	7.0	-	7.0	3.0	-	3.0	7.0	-	7.0	3.0	-	3.0	34	-	34
		WSMR Test	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Subtotal	-	-	-	7.0	-	7.0	7.0	-	7.0	7.0	-	7.0	3.0	-	3.0	7.0	-	7.0	3.0	-	3.0	34	-	34
96TG	T-38		25.0	-	25.0	18.0	-	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	43
	C-12 (1)		3.0	-	3.0	3.0	-	3.0	-	-	-	1.0	-	1.0	-	-	-	1.0	-	1.0	-	-	-	8	-	8
		Subtotal	28.0	-	28.0	21.0	-	21.0	-	-	-	1.0	-	1.0	-	-	-	1.0	-	1.0	-	-	-	51	-	51
56FW, DET 1	F-16	Basics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BSA	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	139	1	140
		CAS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BFM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ACM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ACT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SAT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		LASDT	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	350	-	350
		Subtotal	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	490	1	491
GAF FTS	Tornado	Basics	17.0	-	17.0	88.0	-	88.0	-	-	-	11.0	-	11.0	-	-	-	74.0	-	74.0	43.0	-	43.0	233	-	233
		BSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		CAS	-	-	-	16.0	-	16.0	-	-	-	2.0	-	2.0	-	-	-	6.0	-	6.0	4.0	-	4.0	28	-	28
		BFM	2.0	-	2.0	5.0	-	5.0	-	-	-	2.0	-	2.0	-	-	-	-	-	-	-	-	-	9	-	9
		ACM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ACT	-	-	-	2.0	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	1.0	3	-	3
		SAT	5.0	-	5.0	24.0	-	24.0	-	-	-	5.0	-	5.0	4.0	-	4.0	4.0	-	4.0	2.0	-	2.0	44	-	44
		Refuel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Subtotal	24.0	-	24.0	135.0	-	135.0	-	-	-	20.0	-	20.0	4.0	-	4.0	84.0	-	84.0	50.0	-	50.0	317	-	317
Grand Totals			121.9	0.2	122.0	232.9	0.2	233.0	76.9	0.2	77.0	97.9	0.2	98.0	76.9	0.2	77.0	161.9	0.2	162.0	122.9	0.2	123.0	892	1	893

Notes: (1) Not Modeled

Table A-8. Subsonic MTR Sorties for Proposed Scenario

Unit	Aircraft Type	Mission Type	VR-176			IR-133			IR-142			IR-134			IR-195			IR-192			IR-194			MTR Totals		
			Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Annual Total
82ATRS, DET 1	QF-16	Basics	-	-	-	7.0	-	7.0	7.0	-	7.0	7.0	-	7.0	3.0	-	3.0	7.0	-	7.0	3.0	-	3.0	34	-	34
		WSMR Test	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Subtotal	-	-	-	7.0	-	7.0	7.0	-	7.0	7.0	-	7.0	3.0	-	3.0	7.0	-	7.0	3.0	-	3.0	34	-	34
96TG	T-38		25.0	-	25.0	18.0	-	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	43
	C-12 (1)		3.0	-	3.0	3.0	-	3.0	-	-	-	1.0	-	1.0	-	-	-	1.0	-	1.0	-	-	-	8	-	8
		Subtotal	28.0	-	28.0	21.0	-	21.0	-	-	-	1.0	-	1.0	-	-	-	1.0	-	1.0	-	-	-	51	-	51
56FW, DET 1	F-16	Basics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BSA	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	19.9	0.2	20.0	139	1	140
		CAS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BFM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ACM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ACT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SAT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		LASDT	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	50.0	-	50.0	350	-	350
		Subtotal	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	69.9	0.2	70.0	490	1	491
GAF FTS	Tornado	Basics	17.0	-	17.0	88.0	-	88.0	-	-	-	11.0	-	11.0	-	-	-	74.0	-	74.0	43.0	-	43.0	233	-	233
		BSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		CAS	-	-	-	16.0	-	16.0	-	-	-	2.0	-	2.0	-	-	-	6.0	-	6.0	4.0	-	4.0	28	-	28
		BFM	2.0	-	2.0	5.0	-	5.0	-	-	-	2.0	-	2.0	-	-	-	-	-	-	-	-	-	9	-	9
		ACM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ACT	-	-	-	2.0	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	1.0	3	-	3
		SAT	5.0	-	5.0	24.0	-	24.0	-	-	-	5.0	-	5.0	4.0	-	4.0	4.0	-	4.0	2.0	-	2.0	44	-	44
		Refuel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Subtotal	24.0	-	24.0	135.0	-	135.0	-	-	-	20.0	-	20.0	4.0	-	4.0	84.0	-	84.0	50.0	-	50.0	317	-	317
Grand Totals			121.9	0.2	122.0	232.9	0.2	233.0	76.9	0.2	77.0	97.9	0.2	98.0	76.9	0.2	77.0	161.9	0.2	162.0	122.9	0.2	123.0	892	1	893

Notes: (1) Not Modeled

Table A-9. Subsonic Airspace Flight Profiles for Baseline Scenario

AIRSPACE ID	MISSION ID	AIRCRAFT ID	SPEED (KIAS)	POWER DESC	POWER SETTING	POWER UNIT	PERIOD OF DAY	BUSY MONTH SORTIES	ANNUAL SORTIES	TIME PER SORTIE (MINUTES)	PERCENTAGE OF SORTIE TIME SPENT WITHIN ALTITUDE BANDS (FEET AGL, K REPESENTS 1,000 FEET)																																					TOTAL
											0 15	0 23K	0 24K	400 6K	400 7K	100 23K	100 24K	4K 6K	4K 7K	4K 8K	4K 9K	500 5K	500 14K	500 15K	500 23K	500 24K	500 34K	500 35K	500 39K	500 40K	4K 34K	5K 15K	5K 23K	5K 24K	5K 34K	5K 35K	5K 39K	5.5K 7k	5.5K 13K	5.5K 16K	5.5K 23K	5.5k 24k	5.5K 53K	7K 13K	8K 15K	13K 16K	15K 40K	
TALON	T3896TGT	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	0.92	11	60																			100																			100
TALON	T38BASTL	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	4.33	52	60																			100																			100
TALON	T38BFMTL	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	4.42	53	42																											100											100
TALON	T38ACTTL	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	3.5	42	60																											100											100
TALON	T38ACMTL	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.67	44	24																											100											100
TALON	F16BASTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	21.58	259	54								100																														100
TALON	F16BASTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54								100																														100
TALON	F16CASTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	1.67	20	54											100																											100
TALON	F16TI_TL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	24.83	298	54																					100																	100
TALON	F16TI_TL	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																					100																	100
TALON	F16BFMTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.67	200	54											100																											100
TALON	F16ACMTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	54											100																											100
TALON	F16SATTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																					100																	100
TALON	F16LDTTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	3.33	40	42				100																																		100
BEAK	T3896TGB	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	4.67	56	60																														100								100
BEAK	T38BASBK	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	23.83	286	60																														100								100
BEAK	T38BFMBK	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.58	7	42																														100								100
BEAK	T38ACTBK	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60																														100								100
BEAK	T38REFBK	TORNADO	270	TRAFFIC PATTERN	90	% RPM	daytime	2	24	24																																				100		100
BEAK	F16BASBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54																													100									100
BEAK	F16BASBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																													100									100
BEAK	F16CASBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																															100							100
BEAK	F16TI_BK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	24.83	298	54																																	100					100
BEAK	F16TI_BK	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																																	100					100
BEAK	F16BFMBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.67	200	54																															100							100
BEAK	F16ACMBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																															100							100
BEAK	F16ACTBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	2	24	54																																	100					100
BEAK	F16SATBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																																	100					100
PECOS	T38BFMPE	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	2.08	25	60																											100											100
CENT_MCG	T3896TGC	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1	12	60	100																																					100
CENT_MCG	T38BFMCE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	5.25	63	54																						100																100
CENT_MCG	T38CASCE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	15.58	187	84	100																																					100
CENT_MCG	T38SATCE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.83	22	84	100																																					100
CENT_MCG	T38BSACE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	2.67	32	84	100																																					100
CENT_MCG	F16CASCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	9.92	119	54														100																								100
CENT_MCG	F16CASCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.08	1	54														100																								100
CENT_MCG	F16SATCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54																100																						100
CENT_MCG	F16SATCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																100																						100
CENT_MCG	F16BSACE	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54							100																															100
CENT_MCG	F16BSACE	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54							100																															100
R5107	T38BASWS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	8.5	102	60																						100																100
R5107	T38BFMWS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	12.08	145	48																						100																100
R5107	T38ACTWS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	8.67	104	60																						100																100
R5107	T38ACMWS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	6.67	80	60																						100																100
R5107	T38REFWS	TORNADO	270	TRAFFIC PATTERN	90	% RPM	daytime	0.42	5	24																																			100			100
R5107	F16SATWS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	53	636	54																				100																		100
R5107	F16SATWS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.33	4	54																				100																		100
MESA	T3896TGM	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.17	38	60									100																													100
MESA	T38BSAMS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	0.58	7	60									100																													100
MESA	T38BFMMS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	1.25	15	48									100																													100
MESA	T38ACTMS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.5	6	60									100																													100
MESA	T38ACMMS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60									100																													100
MESA	F16CASMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	20	240	54																	100																					100
MESA	F16CASMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.08	1	54																	100																					100
MESA	F16TI_MS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	26.67	320	54																									100													100
MESA	F16TI_MS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																									100													100
MESA	F16BFMMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	33.33	400	54																									100													100
MESA	F16ACMMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																									100													100
MESA	F16ACTMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	6.33	76	54																	100																					100
MESA	F16SATMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																	100																					100
MESA	F16LDTMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	1.17	14	42				100																																		100
LAVA	T3896TGL	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.33	40	60										100																												100
LAVA	T38BSALV	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60										100																												100
LAVA	T38BFMLV	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	2.67	32	48										100																												100
LAVA	T38ACTLV	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.58	7	60										100																												100
LAVA	T38ACMLV	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60										100																												100
LAVA	F16CASLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	26.5	318	54																		100																				100
LAVA	F16CASLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54																		100																				100
LAVA	F16TI_LV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	28.08	337	54																										100												100
LAVA	F16TI_LV	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54																										100												100
LAVA	F16BFMLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	33.33	400	54																										100												100
LAVA	F16ACMLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																										100												100
LAVA	F16ACTLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	6	72	54																		100																				100
LAVA	F16SATLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.25	99	54																		100																				100
LAVA	F16LDTLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	42					100																																	100
YONDER	T3896TGY	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	4.08	49	60										100																												100
YONDER	T38BASYD	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.5	42	60										100																												100
YONDER	T38BFMYD	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	5.92	71	48										100																												100
YONDER	T38ACTYD	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.92	11	60										100																												100
YONDER	T38ACMYD	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.58	43	60										100																												100
YONDER	F16CASYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	28.08	337	54																		100																				100
YONDER	F16CASYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54																		100																				100
YONDER	F16TI_YD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	24.83	298	54																										100												100
YONDER	F16TI_YD	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																										100												100
YONDER	F16BFMYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	33.33	400	54																										100												100
YONDER	F16ACMYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																										100												100
YONDER	F16ACTYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	54																		100																				100
YONDER	F16SATYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.25	99	54																		100																				100
YONDER	F16LDTYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	42					100																																	100
RED_RIO	T38CASRR	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.08	13	84		100																																				100
RED_RIO	T38SATRR	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	0.17	2	84		100																																				100
RED_RIO	F16CASRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.25	99	54													100																									100
RED_RIO	F16CASRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.08	1	54													100																									100
RED_RIO	F16SATRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54															100																							100
RED_RIO	F16SATRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54															100																							100
RED_RIO	F16BSARR	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	36.08	433	54						100																																100
RED_RIO	F16BSARR	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54						100																																100
OSCURA	T38BSAOS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	2.5	30	84			100																																			100
OSCURA	F16BSAOS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	38.83	466	54							100																															100
OSCURA	F16BSAOS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.33	4	54							100																															100
TALON	QF4-TALN	F-4C	375	TAKEOFF POWER	95	% RPM	daytime	5.83	70	45												33													67													100
BEAK	QF4-BEAK	F-4C	375	TAKEOFF POWER	95	% RPM	daytime	1.67	20	45																												34							33	33		100
MCGREGOR	QF4-MCGR	F-4C	400	TAKEOFF POWER	95	% RPM	daytime	3.33	40	60												50												50														100
R5107	QF4-WSMR	F-4C	400	TAKEOFF POWER	95	% RPM	daytime	20	240	60												50										40															10	100
MESA	QF4-MESA	F-4C	400	TAKEOFF POWER	95	% RPM	daytime	0.25	3	60												50											40														10	100
LAVA	QF4-LAVA	F-4C	400	TAKEOFF POWER	95	% RPM	daytime	0.25	3	60												50												40													10	100
YONDER	QF4-YNDR	F-4C	400	TAKEOFF POWER	95	% RPM	daytime	0.33	4	60												50												40													10	100

Table A-10. Subsonic MTR Flight Profiles for Baseline Scenario

AIRSPACE ID	MISSION ID	AIRCRAFT ID	SPEED (KIAS)	POWER DESC	POWER SETTING	POWER UNIT	PERIOD OF DAY	BUSY MONTH SORTIES	ANNUAL SORTIES	PERCENTAGE OF SORTIE TIME SPENT WITHIN ALTITUDE BANDS (FEET AGL)		
										300 500	500 500	TOTAL
IR-133	T38-96TG	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	1.5	18.0		100	100
IR-133	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-133	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-133	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	11.25	135.0		100	100
IR-134	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-134	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-134	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	1.67	20.0		100	100
IR-142	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-142	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-192	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-192	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-192	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	7	84.0		100	100
IR-194	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-194	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-194	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	4.17	50.0		100	100
IR-195	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-195	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-195	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	0.33	4.0		100	100
VR-176	T38-96TG	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	2.08	25.0		100	100
VR-176	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
VR-176	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
VR-176	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	2	24.0		100	100
IR-133	QF4	F-4C	550	TRAINING ROUTE	98	% RPM	daytime	0.56	6.7	100		100
IR-134	QF4	F-4C	550	TRAINING ROUTE	98	% RPM	daytime	0.56	6.7	100		100
IR-142	QF4	F-4C	550	TRAINING ROUTE	98	% RPM	daytime	0.56	6.7	100		100
IR-192	QF4	F-4C	550	TRAINING ROUTE	98	% RPM	daytime	0.28	3.4	100		100
IR-194	QF4	F-4C	550	TRAINING ROUTE	98	% RPM	daytime	0.28	3.4	100		100
IR-195	QF4	F-4C	550	TRAINING ROUTE	98	% RPM	daytime	0.28	3.4	100		100

Table A-11. Subsonic Airspace Flight Profiles for Proposed Scenario

AIRSPACE ID	MISSION ID	AIRCRAFT ID	SPEED (KIAS)	POWER DESC	POWER SETTING	POWER UNIT	PERIOD OF DAY	BUSY MONTH SORTIES	ANNUAL SORTIES	TIME PER SORTIE (MINUTES)	PERCENTAGE OF SORTIE TIME SPENT WITHIN ALTITUDE BANDS (FEET AGL, K REPESENTS 1,000 FEET)																																					TOTAL
											0	0	0	400	400	100	100	4K	4K	4K	4K	500	500	500	500	500	500	500	500	500	4K	5K	5K	5K	5K	5K	5K	5.5K	5.5K	5.5K	5.5K	5.5k	5.5K	7K	8K	13K	15K	
											15	23K	24K	6K	7K	23K	24K	6K	7K	8K	9K	5K	14K	15K	23K	24K	34K	35K	39K	40K	34K	15K	23K	24K	34K	35K	39K	7k	13K	16K	23K	24k	53K	13K	15K	16K	40K	
TALON	T3896TGT	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	0.92	11	60																			100																			100
TALON	T38BASTL	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	4.33	52	60																			100																			100
TALON	T38BFMTL	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	4.42	53	42																											100											100
TALON	T38ACTTL	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	3.5	42	60																											100											100
TALON	T38ACMTL	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.67	44	24																											100											100
TALON	F16BASTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	21.58	259	54								100																														100
TALON	F16BASTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54								100																														100
TALON	F16CASTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	1.67	20	54											100																											100
TALON	F16TI_TL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	24.83	298	54																					100																	100
TALON	F16TI_TL	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																					100																	100
TALON	F16BFMTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.67	200	54											100																											100
TALON	F16ACMTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	54											100																											100
TALON	F16SATTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																					100																	100
TALON	F16LDTTL	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	3.33	40	42				100																																		100
BEAK	T3896TGB	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	4.67	56	60																														100								100
BEAK	T38BASBK	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	23.83	286	60																														100								100
BEAK	T38BFMBK	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.58	7	42																														100								100
BEAK	T38ACTBK	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60																														100								100
BEAK	T38REFBK	TORNADO	270	TRAFFIC PATTERN	90	% RPM	daytime	2	24	24																																				100		100
BEAK	F16BASBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54																													100									100
BEAK	F16BASBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																													100									100
BEAK	F16CASBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																															100							100
BEAK	F16TI_BK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	24.83	298	54																																	100					100
BEAK	F16TI_BK	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																																	100					100
BEAK	F16BFMBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.67	200	54																															100							100
BEAK	F16ACMBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																															100							100
BEAK	F16ACTBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	2	24	54																																	100					100
BEAK	F16SATBK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																																	100					100
PECOS	T38BFMPE	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	2.08	25	60																											100											100
CENT_MCG	T3896TGC	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1	12	60	100																																					100
CENT_MCG	T38BFMCE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	5.25	63	54																						100																100
CENT_MCG	T38CASCE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	15.58	187	84	100																																					100
CENT_MCG	T38SATCE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.83	22	84	100																																					100
CENT_MCG	T38BSACE	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	2.67	32	84	100																																					100
CENT_MCG	F16CASCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	9.92	119	54														100																								100
CENT_MCG	F16CASCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.08	1	54														100																								100
CENT_MCG	F16SATCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54																100																						100
CENT_MCG	F16SATCE	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																100																						100
CENT_MCG	F16BSACE	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54							100																															100
CENT_MCG	F16BSACE	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54							100																															100
R5107	T38BASWS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	8.5	102	60																						100																100
R5107	T38BFMWS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	12.08	145	48																						100																100
R5107	T38ACTWS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	8.67	104	60																						100																100
R5107	T38ACMWS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	6.67	80	60																						100																100
R5107	T38REFWS	TORNADO	270	TRAFFIC PATTERN	90	% RPM	daytime	0.42	5	24																																			100			100
R5107	F16SATWS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	53	636	54																				100																		100
R5107	F16SATWS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.33	4	54																				100																		100
MESA	T3896TGM	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.17	38	60									100																													100
MESA	T38BSAMS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	0.58	7	60									100																													100
MESA	T38BFMMS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	1.25	15	48									100																													100
MESA	T38ACTMS	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.5	6	60									100																													100
MESA	T38ACMMS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60									100																													100
MESA	F16CASMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	20	240	54																	100																					100
MESA	F16CASMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.08	1	54																	100																					100
MESA	F16TI_MS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	26.67	320	54																									100													100
MESA	F16TI_MS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																									100													100
MESA	F16BFMMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	33.33	400	54																									100													100
MESA	F16ACMMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																									100													100
MESA	F16ACTMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	6.33	76	54																	100																					100
MESA	F16SATMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5	60	54																	100																					100
MESA	F16LDTMS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	1.17	14	42				100																																		100
LAVA	T3896TGL	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.33	40	60										100																												100
LAVA	T38BSALV	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60										100																												100
LAVA	T38BFMLV	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	2.67	32	48										100																												100
LAVA	T38ACTLV	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.58	7	60										100																												100
LAVA	T38ACMLV	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.42	17	60										100																												100
LAVA	F16CASLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	26.5	318	54																		100																				100
LAVA	F16CASLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54																		100																				100
LAVA	F16TI_LV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	28.08	337	54																										100												100
LAVA	F16TI_LV	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54																										100												100
LAVA	F16BFMLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	33.33	400	54																										100												100
LAVA	F16ACMLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																										100												100
LAVA	F16ACTLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	6	72	54																		100																				100
LAVA	F16SATLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.25	99	54																		100																				100
LAVA	F16LDTLV	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	42					100																																	100
YONDER	T3896TGY	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	4.08	49	60										100																												100
YONDER	T38BASYD	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.5	42	60										100																												100
YONDER	T38BFMYD	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	5.92	71	48										100																												100
YONDER	T38ACTYD	TORNADO	350	TAKEOFF POWER	95	% RPM	daytime	0.92	11	60										100																												100
YONDER	T38ACMYD	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	3.58	43	60										100																												100
YONDER	F16CASYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	28.08	337	54																		100																				100
YONDER	F16CASYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54																		100																				100
YONDER	F16TI_YD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	24.83	298	54																										100												100
YONDER	F16TI_YD	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54																										100												100
YONDER	F16BFMYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	33.33	400	54																										100												100
YONDER	F16ACMYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	12.5	150	54																										100												100
YONDER	F16ACTYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	54																		100																				100
YONDER	F16SATYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.25	99	54																		100																				100
YONDER	F16LDTYD	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.33	100	42					100																																	100
RED_RIO	T38CASRR	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	1.08	13	84		100																																				100
RED_RIO	T38SATRR	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	0.17	2	84		100																																				100
RED_RIO	F16CASRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	8.25	99	54													100																									100
RED_RIO	F16CASRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.08	1	54													100																									100
RED_RIO	F16SATRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	16.58	199	54															100																							100
RED_RIO	F16SATRR	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.17	2	54															100																							100
RED_RIO	F16BSARR	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	36.08	433	54						100																																100
RED_RIO	F16BSARR	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.25	3	54						100																																100
OSCURA	T38BSAOS	TORNADO	300	TAKEOFF POWER	95	% RPM	daytime	2.5	30	84			100																																			100
OSCURA	F16BSAOS	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	38.83	466	54							100																															100
OSCURA	F16BSAOS	F-16(G100)	375	TAKEOFF POWER	95	% NC	nighttime	0.33	4	54							100																															100
TALON	QF16TALN	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	5.83	70	45												33													67													100
BEAK	QF16BEAK	F-16(G100)	375	TAKEOFF POWER	95	% NC	daytime	1.67	20	45																												34							33	33		100
MCGREGOR	QF16MCGR	F-16(G100)	400	TAKEOFF POWER	95	% NC	daytime	3.33	40	60												50												50														100
R5107	QF16WSMR	F-16(G100)	400	TAKEOFF POWER	95	% NC	daytime	20	240	60												50										40															10	100
MESA	QF16MESA	F-16(G100)	400	TAKEOFF POWER	95	% NC	daytime	0.25	3	60												50											40														10	100
LAVA	QF16LAVA	F-16(G100)	400	TAKEOFF POWER	95	% NC	daytime	0.25	3	60												50												40													10	100
YONDER	QF16YNDR	F-16(G100)	400	TAKEOFF POWER	95	% NC	daytime	0.33	4	60												50												40													10	100

Table A-12. Subsonic MTR Flight Profiles for Proposed Scenario

AIRSPACE ID	MISSION ID	AIRCRAFT ID	SPEED (KIAS)	POWER DESC	POWER SETTING	POWER UNIT	PERIOD OF DAY	BUSY MONTH SORTIES	ANNUAL SORTIES	PERCENTAGE OF SORTIE TIME SPENT WITHIN ALTITUDE BANDS (FEET AGL)		
										300 500	500 500	TOTAL
IR-133	T38-96TG	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	1.5	18.0		100	100
IR-133	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-133	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-133	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	11.25	135.0		100	100
IR-134	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-134	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-134	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	1.67	20.0		100	100
IR-142	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-142	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-192	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-192	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-192	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	7	84.0		100	100
IR-194	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-194	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-194	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	4.17	50.0		100	100
IR-195	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
IR-195	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
IR-195	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	0.33	4.0		100	100
VR-176	T38-96TG	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	2.08	25.0		100	100
VR-176	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	5.83	70.0	100		100
VR-176	F16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	nighttime	0.02	0.2	100		100
VR-176	T38-GAF	T-38A	299	TAKEOFF POWER	100	% RPM	daytime	2	24.0		100	100
IR-133	QF16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	0.56	6.7	100		100
IR-134	QF16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	0.56	6.7	100		100
IR-142	QF16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	0.56	6.7	100		100
IR-192	QF16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	0.28	3.4	100		100
IR-194	QF16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	0.28	3.4	100		100
IR-195	QF16	F-16(G100)	500	MID SPD TRAINING RT	95.4	% NC	daytime	0.28	3.4	100		100