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FINAL

Wyle Report

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AICUZ Update Noise Study for Naval Air Station North Island and Outlying Landing Field Imperial Beach, California

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1.0 Background

This report is based on Wyle Report WR 06-11 and its two addendums (Wyle 2006; Wyle 2008a; Wyle 2010). Finalized in September 2006, WR 06-11 examined CY2005 aircraft operations at Naval Air Station (NAS) North Island and Naval Outlying Landing Field (NOLF) Imperial Beach and a Prospective (CY2012) scenario. The first addendum, published in 2008, amended the Prospective scenario of WR 06-11 to reflect Multi-mission Maritime Aircraft (MMA; P-8A), transitions to other platforms and projected increases in transient aircraft operations associated with a future homeporting of a 3rd aircraft carrier on the West Coast of the United States (Wyle 2008a), affecting NAS North Island only. The second addendum, published in January 2010, included the changes made for the 2008 addendum plus anticipated changes to transient operations associated with introduction of the F-35C Lightning II (aka Joint Strike Fighter (JSF)) into the fleet, affecting NAS North Island only (Wyle 2010).

The purpose of this report is to serve an AICUZ Update for the NAS and the NOLF to reflect a Baseline condition and a Prospective (CY2020) scenario. Annual flight operations for the NAS and the NOLF's Baseline scenario are based on a 7-year average of the total flight operations between CY2003 and CY2009. In addition to the projected changes included in Addendum #2, the Prospective (CY2020) scenario of this report also includes:

- 30 percent increase in MH-60 flight operations at the NAS and the NOLF, relative to Baseline;
- 10 percent decrease in F/A-18C/D Naval Aviation Depot (NADEP) maintenance operations; and
- 300 percent increase in F/A-18E/F NADEP maintenance operations.

The purpose of this report is to also utilize updated EA-6B reference acoustic data and corrected topography data.

Section 2 presents the Baseline scenario modeled operations and resultant CNEL contours. Section 3 presents the CY2020 scenario modeled operations and resultant CNEL contours.

2.0 Baseline Scenario

Baseline annual flight operations were based on a 7-year average of the total flight operations as given by the published Air Traffic Activity Reports (ATARs) for the NAS and the NOLF between CY2003 and CY2009 (NAS North Island 2010). Table 1 shows the 7-year data highlighted from the ATARs along with total operations for further years for consistency with an update of WR 06-11. For NAS North Island and NOLF Imperial Beach, the relevant 7-year averages are 94,554 and 248,726 flight operations, respectively. Figure 1 shows a graph of the data from Table 1. For NAS North Island, the peak year from a 20-year history was 1995 with nearly 142,000 flight operations with the peak year during its most recent 7 years being CY2003 with over 115,000 flight operations. For NOLF Imperial Beach, the peak year from a 12-year history and its most recent 7 years was CY2009 with over 284,000 flight operations.

Annual flight operations by type of aircraft, type of flight operation and by Community Noise Equivalent Level (CNEL) time period (i.e., daytime 0700-1900, evening 1900-2200 and nighttime 2200-0700) from Addendum #2 were reviewed and modified by the Navy with its total scaled to match the 7-year averages of the total flight operations (Henderson 2010). Tables 2 and 3 show the resultant annual flight operations for the NAS and the NOLF, respectively. For NAS North Island, the most frequent operator is the HSC/HSL H-60 helicopter aircraft with nearly 61,500 annual flight operations (65 percent). Transient fighter/attack jet aircraft (i.e., F/A-18E/F Super Hornet, EA-6B Prowler, F/A-18C/D (legacy) Hornet and AV-8B Harrier II) constitute 3 percent of the total flight operations. For conservative noise exposure, the AV-8 operations are modeled as F/A-18C/D Hornet aircraft. For project scope purposes, the H-53/H-3 operations are modeled as SH-60B Seahawk aircraft. CNEL evening and nighttime operations consist of 9 percent and 1 percent of the total flight operations, respectively, 80-90 percent of which is by the H-60 helicopters. Flight operations are dominated by non-interfacility departures and arrivals and interfacility departures/arrivals to/from NOLF Imperial Beach. Only 13 percent of the total flight operations are operations in the local or instrument traffic pattern.

The Baseline scenario for NOLF Imperial Beach considers 248,726 annual H-60 flight operations, 28 percent of which are during the CNEL evening period and 2 percent of which are during the CNEL nighttime period. Touch and Go operations are the dominant type of operation at NOLF Imperial Beach with 86 percent of the total flight operations.

For noise and Accident Potential Zone (APZ) modeling purposes, annual flight operations must be distributed to runways and average daily flight tracks. Table 4 lists the average daily runway and flight track utilization percentages for each modeled aircraft type at NAS North Island. These percentages apply to all three CNEL time periods and were derived from WR 06-11. Per Table 4a, 85-90 percent of the fixed-wing departures are from Runway 18 and between 1-13 percent of the fixed-wing departures using Runway 29 depending on the type of aircraft. Although most of the cargo aircraft, P-3 Orion aircraft and small aircraft (C-12, Cessna 210 and Cessna 172) utilize Runway 18 for arrivals, the other types of aircraft use Runway 29 for 70 percent of their non-break arrivals and Runway 36 for the remainder of their non-break arrivals. The Hotel Visual approach is the most frequently used approach for non-break arrivals to Runway 29. Almost all of the overhead break arrivals utilize Runway 29. As shown in Table 4b, H-60 aircraft are not modeled to utilize the runways but have 65 percent of their departures and arrivals to/from Pads 3 and 10 and 35 percent of their departures and arrivals to/from Pads 5 and 6. The modeled flight tracks listed in Tables 4a

and 4b are shown in Figures 3 through 10. The Hotel Visual approach flight tracks are tracks labeled F-29A1 through F-29A4.

Tables 5a and 5b show the resultant Annual Average Daily (AAD) flight events on each NAS North Island modeled flight track, derived from multiplying the annual flight operations from Tables 2 and 3 by the percentages shown in Tables 4a and 4b and dividing by 365. Pattern operations were further divided by 2 to derive the number of events or circuits for each aircraft type. Note Lear 24/36/36 aircraft were modeled as 17 percent Lear 24 and 83 percent Lear 35/36, identical to modeling in WR 06-11. NAS North Island experiences approximately 242 AAD flight events, or approximately 10 events per hour on average.

Table 6 shows the average daily runway/pad and flight track utilization percentages for the H-60 at NOLF Imperial Beach. Again, these percentages apply to all three CNEL time periods and were derived from WR 06-11. Table 6 also shows the resultant AAD flight events derived from multiplying the annual flight operations from Table 2 by the runway/pad and flight track percentages and dividing by 365. Touch and Go operations were further divided by 2 to derive the number of events or circuits. NOLF Imperial Beach experiences approximately 387 AAD flight events, approximately 16 events per hour on average.

Besides flight operations, NAS North Island hosts maintenance run-up operations. The modeled run-ups from WR 06-11 served as a basis for the maintenance run-up operations for this report. The NADEP updated the modeled operations and profiles for the C-2 Greyhound, E-2C Hawkeye, CH-53E Super Stallion, F/A-18C/D and F/A-18E/F aircraft (Henderson 2010). Table 7a shows the resultant NADEP run-ups. None of the NADEP run-ups are conducted during the CNEL evening or nighttime periods. Table 7b lists the remaining run-ups identical to those from WR 06-11. Figure 2 shows the modeled run-up locations. Per NAS guidance, run-up locations were updated and corrected relative to WR 06-11.

Flight profiles (i.e., altitude, power and speed schedules along each flight track) are identical to those modeled for WR 06-11 and are depicted in Appendix B of WR 06-11.

The only remaining modeling parameter is climatic conditions and they are identical to WR 06-11, i.e., daily averages for each month of CY2005, resulting in the modeled condition of 62 degrees Fahrenheit and 73.5 percent relative humidity. These conditions corresponded to November 2005.

Using the data described in Sections 4.1 through 4.4, NOISEMAP Version 7.2 (Wyle 1998) and the Rotorcraft Noise Model (RNM) Version 7.2.4 (Wyle 2008) were used to calculate and plot the 60 dB through 85 dB CNEL contours for the Baseline AAD operations. RNM was only used for the H-60 flight operations.

Figure 11 shows the Baseline contours for NAS North Island. On the west side of the NAS, the 65 dB CNEL contour extends over the channel to the eastern edge of the Point Loma peninsula. To the southeast, the CNEL contours (65 dB and greater) overlay parts of the City of Coronado. The 'leg' of 60 dB CNEL to the east of the NAS over San Diego Bay is due to H-60 flight operations. The 'finger' of 60 dB and 65 dB contours near the southernmost part of the Bay is primarily due to EA-6B arrivals to Runway 29. The largest part of the CNEL contours is over the ocean south of the NAS. Fixed-wing transient jet aircraft contribute the majority of the CNEL exposure.

The Baseline contours for NOLF Imperial Beach are shown in Figure 11 but are the focus of Figure 12. The 65 dB CNEL contour is nearly wholly contained within the NOLF boundary. The small contours of 60 dB and 65 dB CNEL near the Mexico border are due to a rise in ground elevation for helicopter departures on flight track IB-27D1 heading east.

3.0 CY2020 Prospective Scenario

The annual flight operations for the CY2020 Prospective Scenario for NAS North Island and NOLF Imperial Beach are shown in Tables 8 and 9 and were provided by the Navy (Henderson 2010). The Navy anticipates nearly 100,000 annual flight operations with less than one operation per day on average by F-35C Lightning II (aka Joint Strike Fighter) aircraft. EA-6B Prowler aircraft would transition to the E/A-18G Growler aircraft which was modeled by an F/A-18E/F Super Hornet aircraft. AV-8B, C-210, Flying Club C-172 and H-53/H-3 aircraft would be retired or no longer conduct operations at the NAS. P-3 Orion (four-engine turboprop) aircraft would transition to P-8A Poseidon (twin engine jet) aircraft. De Havilland Canada Dash 8 aircraft were conservatively modeled as E-2C Hawkeye aircraft.

As shown in Table 8, the CY2020 Prospective Scenario for NAS North Island forecasts annual flight operations to increase to 100,325. H-60 operations would increase by 30 percent relative to the Baseline scenario and would continue to be the most frequent operator with 80,042 annual flight operations (80 percent). Identical to Baseline, transient fighter/attack jet aircraft (i.e., F-35C, F/A-18E/F, E/A-18G and F/A-18C/D) would constitute 3 percent of the total flight operations at the NAS. CNEL evening and nighttime operations would consist of 11 percent and 3 percent of the total flight operations, respectively, up from 9 percent and 1 percent, respectively, for Baseline. The H-60 would be responsible for 85 percent of the overall evening flight operations but only 53 percent of the nighttime flight operations at the NAS. Similar to Baseline, pattern work would only contribute 14 percent of the total flight operations as the remainder would be non-interfacility departures and arrivals and interfacility departures/arrivals to/from NOLF Imperial Beach.

As shown in Table 9, the CY2020 Prospective scenario for NOLF Imperial Beach considers a 30 percent increase relative to the Baseline scenario to 323,344 flight operations. CNEL evening and nighttime percentages would be identical to Baseline at 28 percent and 2 percent, respectively, as would the dominant type of flight operation be Touch and Go with 86 percent of the total flight operations.

The runway and flight utilization percentages for the CY2020 Prospective scenario would not change relative to Baseline (Tables 4 and 5). F-35C, E/A-18G, Dash 8 and P-8A were modeled with F/A-18C/D, EA-6B, E-2C and P-3A Baseline utilization percentages, respectively. Tables 10a and 10b list the resultant annual average daily flight events on each NAS North Island modeled flight track. NAS North Island would experience approximately 253 annual average daily flight events, or approximately 11 per hour on average. Similarly, as shown in Table 11, NOLF Imperial Beach would experience approximately 500 annual average daily flight events or approximately 21 per hour on average.

As provided by the Navy, maintenance run-up operations would be identical to Baseline except NADEP F/A-18C/D operations would increase by 10 percent and NADEP F/A-18E/F operations would increase by 300 percent.

As documented in Addendum #2, F-35C flight profiles were derived from the Karnes2 dataset (Wyle 2009), adjusted to local course rules and approved by the Navy (Williams 2010). As reference acoustic data does not yet exist for the F-35C, the F-35C was modeled with reference acoustic data from the F-35A measured in 2008 at Edwards AFB. Per the same modeling as Addendum #1, and as reference acoustic data does not yet exist for the P-8A aircraft, the P-8A was modeled with reference acoustic data from a Boeing 737-700 aircraft in NOISEMAP's database.

All other modeling parameters were identical to Baseline.

Using the data described in the above section, NOISEMAP Version 7.2 and the Rotorcraft Noise Model (RNM) Version 7.2.4 were used to calculate and plot the 60 dB through 85 dB CNEL contours for the Prospective AAD operations. RNM was only used for the H-60 flight operations.

Figure 13 shows the Prospective contours for NAS North Island which are similar to the Baseline contours of Figure 3. On the west side of the NAS, the 65 dB CNEL contour would extend over the channel to the eastern edge of the Point Loma peninsula. To the southeast, the CNEL contours (65 dB and greater) would overlay parts of the City of Coronado but up to 2 dB less the Baseline. Just as in Baseline, the 'leg' of 60 dB CNEL to the east of the NAS over San Diego Bay would be due to H-60 flight operations, increasing approximately 1 dB relative to the Baseline scenario. The largest part of the CNEL contours is over the ocean south of the NAS.

The Prospective contours for NOLF Imperial Beach are shown in Figure 13 but are the focus of Figure 14. The 65 dB CNEL contour would be nearly wholly contained within the NOLF boundary. The small contours of 60 dB and 65 dB CNEL near the Mexico border are due to a rise in ground elevation for helicopter departures on flight track IB-27D1 heading east.

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Table 1 Annual Flight Operations from Air Traffic Activity Reports

(a) NAS North Island

Calendar Year	Navy/ Marine	Other Military	Air Carrier	General Aviation	Total
1990	105,980	2,178	3,048	9,862	121,068
1991	105,746	2,052	4,381	11,341	123,520
1992	104,340	2,209	4,299	16,288	127,136
1993	109,215	1,837	4,491	18,848	134,391
1994	106,985	2,007	5,332	26,800	141,124
1995	109,304	3,050	2,688	26,991	142,033
1996	115,752	2,609	1,513	9,456	129,330
1997	112,344	2,620	1,628	5,064	121,656
1998	125,974	3,027	2,011	6,269	137,281
1999	123,344	3,112	2,026	6,249	134,731
2000	123,788	2,979	4,031	5,768	136,566
2001	121,412	4,662	3,372	6,061	135,507
2002	113,658	4,002	5,474	15,019	138,153
2003	93,378	3,962	5,249	12,886	115,475
2004	83,614	3,024	5,601	15,802	108,041
2005	81,422	1,838	3,844	8,205	95,309
2006	62,185	3,062	3,664	13,944	82,855
2007	63,661	4,706	3,883	14,729	86,979
2008	64,167	3,121	3,672	12,123	83,083
2009	73,272	3,058	3,732	10,074	90,136

Source: WR 06-11; NAS North Island 2010

(b) NOLF Imperial Beach

Calendar Year	Navy/ Marine	Other Military	Air Carrier	General Aviation	Total
1998	216,783	2,262	-	156	219,201
1999	218,413	4,352	-	72	222,837
2000	174,675	5,656	-	32	180,363
2001	203,838	5,631	-	16	209,485
2002	233,776	5,076	-	52	238,904
2003	249,171	4,057	-	50	253,278
2004	238,784	4,009	-	8	242,801
2005	212,523	10,945	-	261	223,729
2006	224,518	14,234	-	40	235,792
2007	219,737	14,028	-	173	233,938
2008	261,016	6,154	-	44	267,214
2009	275,207	9,004	-	122	284,333

Source: ATC 2006b; NAS North Island 2010

Table 2 Baseline Annual Flight Operations at NAS North Island

Squadron/Unit	Aircraft Type (Modeled As)	Departure				Interfacility Departure to OLF Imperial Beach				Other Arrival				Interfacility Arrival from OLF Imperial Beach				Overhead Break Arrival				Touch and Go (3)				GCA Box (3)				TOTAL			
		0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
NADEP/Transient	F/A-18E/F	67	3	1	71	-	-	-		37	2	1	40	-	-	-		30	-	-	30	4	-	-	4	8	2	1	11	146	7	3	156
Transient	E/A-6B	464	9	4	477					443	9	-	452					16	9	-	25	-	-	-	-	-	-	-	-	923	27	4	954
NADEP/Transient	F/A-18C/D	596	24	10	630	-	-	-		334	17	7	358	-	-	-		272	-	-	272	35	-	-	35	76	14	8	98	1,313	55	25	1,393
Transient	AV-8B (F/A-18C/D)	42	9	-	51	-	-	-		42	9	-	51	-	-	-		-	-	-	-	-	-	-	-	-	6	-	6	84	24	-	108
Transient	C-5	95	7	3	105	-	-	-		95	7	3	105	-	-	-		-	-	-	-	-	-	-	-	24	3	-	27	214	17	6	237
Transient	C-17	105	4	-	109	-	-	-		105	4	-	109	-	-	-		-	-	-	-	-	-	-	-	26	3	-	29	236	11	-	247
DHS-CBP	Citation 550	1,447	27	-	1,474	-	-	-		1,435	38	-	1,473	-	-	-		-	-	-	-	6	-	-	6	158	-	-	158	3,046	65	-	3,111
L3 Flight International	Lear 24/35/36 (Lear25 & Lear35)	1,726	-	-	1,726	-	-	-		1,726	-	-	1,726	-	-	-		-	-	-	-	503	-	-	503	1,526	-	-	1,526	5,481	-	-	5,481
VR-57	C-40	1,519	38	23	1,580	-	-	-		1,475	61	45	1,581	-	-	-		-	-	-	-	280	43	36	359	-	-	-	-	3,274	142	104	3,520
Transient	C-130H	573	22	-	595	-	-	-		573	22	-	595	-	-	-		-	-	-	-	-	-	-	-	39	13	-	52	1,185	57	-	1,242
VRC-30	C-2	932	71	5	1,008	-	-	-		835	40	4	879	-	-	-		114	15	-	129	174	9	-	183	465	45	-	510	2,520	180	9	2,709
NADEP	E-2	190	-	-	190	-	-	-		190	-	-	190	-	-	-		-	-	-	-	-	-	-	-	33	-	-	33	413	-	-	413
Station/DHS-CBP	C-12 (C-12/C-26)	971	45	12	1,028	-	-	-		988	30	10	1,028	-	-	-		-	-	-	-	208	-	-	208	164	16	1	181	2,331	91	23	2,445
Station/DHS-CBP	C-210	376	10	-	386	-	-	-		382	4	-	386	-	-	-		-	-	-	-	6	-	-	6	113	3	-	116	877	17	-	894
DHS-CPB/VP Det	P-3	938	36	19	993	-	-	-		938	37	18	993	-	-	-		-	-	-	-	-	-	-	-	33	13	39	85	1,909	86	76	2,071
Flying Club	C-172	3,705	32	-	3,737	-	-	-		3,721	16	-	3,737	-	-	-		-	-	-	-	38	-	-	38	30	55	-	85	7,494	103	-	7,597
DHS-CPB, NADEP, HSC	H-53/H-3 (H-60)	165	35	-	200	-	-	-		165	35	-	200	-	-	-		-	-	-	-	-	-	-	-	4	3	-	7	334	73	-	407
HSC/HSL	H-60	12,749	1,685	199	14,633	10,431	1,380	163	11,974	12,272	2,022	340	14,634	10,041	1,655	278	11,974	-	-	-	-	-	-	-	-	7,575	694	85	8,354	53,068	7,436	1,065	61,569
Total		26,660	2,057	276	28,993	10,431	1,380	163	11,974	25,756	2,353	428	28,537	10,041	1,655	278	11,974	432	24	-	456	1,254	52	36	1,342	10,274	870	134	11,278	84,848	8,391	1,315	94,554

Notes:
1. AV-8B operations were modeled as Transient F/A-18C/D
2. H-53/H-3 operations were modeled as H-60
3. Each Touch and Go circuit is counted as two operations; Each GCA Box circuit is counted as two operations

Source: Henderson 2010

Table 3 Baseline Annual Flight Operations at NOLF Imperial Beach

Squadron/Unit	Aircraft Type	Arrival				Interfacility Arrival from NAS North Island				Touch and Go (1)				Departure				Interfacility Departure to NAS North Island				TOTAL			
		0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
HSC/HSL	H-60	1,117	3,551	182	4,850	10,431	1,380	163	11,974	150,555	60,222	4,301	215,078	1,551	3,245	54	4,850	10,041	1,655	278	11,974	173,695	70,053	4,978	248,726

Notes:
1. Each Touch and Go circuit counted as two operations

Source: Henderson 2010

Table 4 Modeled Baseline Average Daily Daytime, Evening and Nighttime Runway and Flight Track Utilization Percentages for NAS North Island

(a) All Modeled Types Except H-60

Operation Type	Runway	Flight Track ID	Flight Track Description	F/A-18C/D		F/A-18E/F		E/A-6B		C-5A		C-17		Citation 550		Lear 25		Lear 35		C-40		C-130H		C-2		E-2		C-12 (C-12/C-26)		Cessna 210		P-3		Cessna 172		H-53/H-3	
				Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track	Rwy	Track
Departure	NZY-11	F-11D1	NASNI-3 Departure on Runway 11	2%	100%	2%	100%	2%	100%	1%	100%	1%	100%	95%	100%	2%	100%	2%	100%	3%	100%	3%	100%	2%	100%	2%	100%	3%	100%		100%	3%	100%		100%		100%
	NZY-18	F-18D1	NASNI-3 Departure on Runway 18	85%	100%	85%	100%	85%	100%	98%	100%	98%	100%	3%	100%	85%	100%	85%	100%	95%	100%	95%	100%	85%	100%	85%	100%	95%	100%	85%	100%	95%	100%	85%	100%		100%
	NZY-29	F-29D1	NASNI-3 Departure on Runway 29	13%	100%	13%	100%	13%	100%	1%	100%	1%	100%	2%	100%	13%	100%	13%	100%	2%	100%	2%	100%	13%	100%	13%	100%	2%	100%	2%	100%	2%	100%	2%	100%		100%
	NZY-36	F-36D1	SR54 Departure on Runway 36 - Intersection Taxiway Bravo	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%		100%	13%	100%	-	100%	13%	100%		100%
	NZY-P3	P3D1	H-60 Point Loma Departure from Pad 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	65%	50%
		P3D4	H-60 SR 54 Departure from Pad 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	65%	50%
	NZY-P5	P5D1	H-60 Point Loma Departure from Pad 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	35%	50%
		P5D4	H-60 SR 54 Departure from Pad 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	35%	50%
Arrival	NZY-18	F-18A1	Lindberg LOC Approach to Runway 18 from West							5%	96%	5%	95%	5%	95%					5%	95%	5%	95%					5%	95%	20%		5%	95%	20%			
		F-18A2	Lindberg LOC Approach to Runway 18 from East								4%		5%		5%						5%		5%						5%				5%				
		F-18A3	SR54 Arrival on Runway 18																												100%				100%		
	NZY-29	F-29A1	Hotel Visual Approach on Runway 29		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		
		F-29A2	Hotel Visual Approach on Runway 29 from south of Bay		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		
		F-29A3	Hotel Visual Approach on Runway 29 from mid-Bay	70%	25%	70%	25%	70%	25%	68%	25%	70%	25%	70%	25%	70%	25%	70%	25%	70%	25%	70%	25%	70%	25%	70%	25%	69%	25%	80%	25%	70%	25%	80%	25%		
		F-29A4	Hotel Visual Approach on Runway 29 from mid-Bay east		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		25%		
	NZY-36	F-36A1	Straight-in Arrival on Runway 36	30%	100%	30%	100%	30%	100%	27%	100%	25%	100%	25%	100%	30%	100%	30%	100%	25%	100%	25%	100%	30%	100%	30%	100%	26%	100%		100%	25%	100%		100%		100%
	NZY-P10	P10A1	H-60 Point Loma Arrival to Pad 10																																	65%	50%
		P10A4	H-60 SR 54 Arrival to Pad 10																																	65%	50%
	NZY-P6	P6A1	H-60 Point Loma Arrival to Pad 6																																	35%	50%
		P6A4	H-60 SR 54 Arrival to Pad 6																																	35%	50%
Break Arrival	NZY-18	F-18O1	Overhead Break Arrival on Runway 18	2%	100%	2%	100%		100%		100%		100%		100%		100%		100%		100%		100%	2%	100%		100%		100%		100%		100%		100%		100%
	NZY-29	F-29O1	Overhead Break Arrival on Runway 29	98%	100%	98%	100%	100%	100%		100%		100%		100%		100%		100%		100%		100%	98%	100%		100%		100%		100%		100%		100%		100%
Touch and Go	NZY-29	F-29T1	Touch and Go Pattern	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
GCA Box	NZY-29	FR-29G1	GCA Pattern	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 4 Modeled Baseline Average Daily Daytime, Evening and Nighttime Runway and Flight Track Utilization Percentages for NAS North Island
(b) H-60 Only

Operation Type	Runway/ Pad	Flight Track ID	Flight Track Description	H-60							
				Rwy/ Pad Utilization	Type1	Type1 Utilization	Type2	Type2 Utilization	Type 3	Type 3 Utilization	Track Utilization
Departure	NZY-11	F-11D1	NASNI-3 Departure on Runway 11								
	NZY-18	F-18D1	NASNI-3 Departure on Runway 18								
	NZY-29	F-29D1	NASNI-3 Departure on Runway 29								
	NZY-36	F-36D1	SR54 Departure on Runway 36 - Intersection Taxiway Bravo								
	NZY-P3	P3D1	H-60 Point Loma Departure from Pad 3	65%							50%
		P3D4	H-60 SR 54 Departure from Pad 3								
	NZY-P5	P5D1	H-60 Point Loma Departure from Pad 5	35%							50%
		P5D4	H-60 SR 54 Departure from Pad 5								
Interfacility Departure	NZY-P3	P3D2-27	H-60 Channel Departure from NASNI Pad 3 to OLF IB Runway 27	65%	via Channel	90%	To Runway	45%	Runway 27	100%	100%
		P3D2-P1	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 1				To Pads	55%	to Pad 1	14%	100%
		P3D2-P2	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 2						to Pad 2	31%	
		P3D2-P3	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 3						to Pad 3	12%	
		P3D2-P4	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 4						to Pad 4	31%	
		P3D2-P5	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 5						to Pad 5	12%	
		P3D3-27	H-60 Bay Departure from NASNI Pad 3 to OLF IB Runway 27		via Bay	10%	To Runway	35%	Runway 27	100%	100%
		P3D3-P1	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 1				To Pads	65%	to Pad 1	14%	100%
		P3D3-P2	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 2						to Pad 2	29%	
		P3D3-P3	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 3						to Pad 3	14%	
		P3D3-P4	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 4						to Pad 4	29%	
		P3D3-P5	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 5						to Pad 5	14%	
	NZY-P5	P5D2-27	H-60 Channel Departure from NASNI Pad 5 to OLF IB Runway 27	35%	via Channel	90%	To Runway	45%	Runway 27	100%	100%
		P5D2-P1	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 1				To Pads	55%	to Pad 1	14%	100%
		P5D2-P2	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 2						to Pad 2	31%	
		P5D2-P3	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 3						to Pad 3	12%	
		P5D2-P4	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 4						to Pad 4	31%	
		P5D2-P5	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 5						to Pad 5	12%	
		P5D3-27	H-60 Bay Departure from NASNI Pad 5 to OLF IB Runway 27		via Bay	10%	To Runway	35%	Runway 27	100%	100%
		P5D3-P1	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 1				To Pads	65%	to Pad 1	14%	100%
		P5D3-P2	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 2						to Pad 2	29%	
		P5D3-P3	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 3						to Pad 3	14%	
		P5D3-P4	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 4						to Pad 4	43%	
Arrival	NZY-18	F-18A1	Lindberg LOC Approach to Runway 18 from West								
		F-18A2	Lindberg LOC Approach to Runway 18 from East								
		F-18A3	SR54 Arrival on Runway 18								
	NZY-29	F-29A1	Hotel Visual Approach on Runway 29								
		F-29A2	Hotel Visual Approach on Runway 29 from south of Bay								
		F-29A3	Hotel Visual Approach on Runway 29 from mid-Bay								
		F-29A4	Hotel Visual Approach on Runway 29 from mid-Bay east								
	NZY-36	F-36A1	Straight-in Arrival on Runway 36								
	NZY-P10	P10A1	H-60 Point Loma Arrival to Pad 10	65%							50%
		P10A4	H-60 SR 54 Arrival to Pad 10								
	NZY-P6	P6A1	H-60 Point Loma Arrival to Pad 6	35%							50%
		P6A4	H-60 SR 54 Arrival to Pad 6								
Break Arrival	NZY-18	F-18O1	Overhead Break Arrival on Runway 18								
	NZY-29	F-29O1	Overhead Break Arrival on Runway 29								

Table 4 Modeled Baseline Average Daily Daytime, Evening and Nighttime Runway and Flight Track Utilization Percentages for NAS North Island
(b) H-60 Only (concluded)

Operation Type	Runway/ Pad	Flight Track ID	Flight Track Description	H-60							
				Rwy/ Pad Utilization	Type1	Type1 Utilization	Type2	Type2 Utilization	Type 3	Type 3 Utilization	Track Utilization
Interfacility Arrival	NZY-P10	27D2-P10	H-60 Channel Departure from OLF IB Runway 27 to NASNI Pad 10	65%	from Runway	45%	Runway 27	100%	via Channel	80%	100%
		27D3-P10	H-60 Bay Departure from OLF IB Runway 27 to NASNI Pad 10						via Bay	20%	
		P1D2-P10	H-60 Channel Departure from OLF IB Pad 1 to NASNI Pad 10		from Pads	55%	from Pad 1	14%	via Channel	75%	100%
		P1D3-P10	H-60 Bay Departure from OLF IB Pad 1 to NASNI Pad 10						via Bay	25%	
		P2D2-P10	H-60 Channel Departure from OLF IB Pad 2 to NASNI Pad 10				from Pad 2	30%	via Channel	80%	100%
		P2D3-P10	H-60 Bay Departure from OLF IB Pad 2 to NASNI Pad 10						via Bay	20%	
		P3D2-P10	H-60 Channel Departure from OLF IB Pad 3 to NASNI Pad 10				from Pad 3	13%	via Channel	85%	100%
		P3D3-P10	H-60 Bay Departure from OLF IB Pad 3 to NASNI Pad 10						via Bay	15%	
		P4D2-P10	H-60 Channel Departure from OLF IB Pad 4 to NASNI Pad 10				from Pad 4	30%	via Channel	80%	100%
		P4D3-P10	H-60 Bay Departure from OLF IB Pad 4 to NASNI Pad 10						via Bay	20%	
		P5D2-P10	H-60 Channel Departure from OLF IB Pad 5 to NASNI Pad 10				from Pad 5	13%	via Channel	85%	100%
		P5D3-P10	H-60 Bay Departure from OLF IB Pad 5 to NASNI Pad 10						via Bay	15%	
	NZY-P6	27D2-P6	H-60 Channel Departure from OLF IB Runway 27 to NASNI Pad 6	35%	from Runway	28%	Runway 27	100%	via Channel	65%	100%
		27D3-P6	H-60 Bay Departure from OLF IB Runway 27 to NASNI Pad 6						via Bay	20%	
		27D5-P6	H-60 Surf Departure from OLF IB Runway 27 to NASNI Pad 6						via Surf	15%	
		P1D2-P6	H-60 Channel Departure from OLF IB Pad 1 to NASNI Pad 6		from Pads	72%	from Pad 1	14%	via Channel	65%	100%
		P1D3-P6	H-60 Bay Departure from OLF IB Pad 1 to NASNI Pad 6						via Bay	25%	
		P1D5-P6	H-60 Surf Departure from OLF IB Pad 1 to NASNI Pad 6						via Surf	10%	
		P2D2-P6	H-60 Channel Departure from OLF IB Pad 2 to NASNI Pad 6				from Pad 2	30%	via Channel	65%	100%
		P2D3-P6	H-60 Bay Departure from OLF IB Pad 2 to NASNI Pad 6						via Bay	20%	
		P2D5-P6	H-60 Surf Departure from OLF IB Pad 2 to NASNI Pad 6						via Surf	15%	
		P3D2-P6	H-60 Channel Departure from OLF IB Pad 3 to NASNI Pad 6				from Pad 3	13%	via Channel	70%	100%
		P3D3-P6	H-60 Bay Departure from OLF IB Pad 3 to NASNI Pad 6						via Bay	15%	
		P3D5-P6	H-60 Surf Departure from OLF IB Pad 3 to NASNI Pad 6						via Surf	15%	
		P4D2-P6	H-60 Channel Departure from OLF IB Pad 4 to NASNI Pad 6				from Pad 4	30%	via Channel	65%	100%
		P4D3-P6	H-60 Bay Departure from OLF IB Pad 4 to NASNI Pad 6						via Bay	20%	
		P4D5-P6	H-60 Surf Departure from OLF IB Pad 4 to NASNI Pad 6						via Surf	15%	
		P5D2-P6	H-60 Channel Departure from OLF IB Pad 5 to NASNI Pad 6				from Pad 5	13%	via Channel	70%	100%
		P5D3-P6	H-60 Bay Departure from OLF IB Pad 5 to NASNI Pad 6						via Bay	15%	
		P5D5-P6	H-60 Surf Departure from OLF IB Pad 5 to NASNI Pad 6						via Surf	15%	
Touch and Go	NZY-29	F-29T1	Touch and Go Pattern								
GCA Box	NZY-29	FR-29G1	GCA Pattern	100%							100%
FCF Pattern	NZY-18	18T1	H-60 FCF Pattern on Runway 18								

Table 5 Modeled Average Daily Flight Events for Baseline at NAS North Island

(a) All Modeled Types Except H-60

Operation Type	Runway/ Pad	Flight Track	F/A-18C/D				F/A-18E/F				E/A-6B				C-5A				C-17			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	0.0349	0.0018	0.0005	0.0372	0.0037	0.0002	0.0001	0.0040	0.0254	0.0005	0.0002	0.0261	0.0026	0.0002	0.0001	0.0029	0.0028	0.0001	-	0.0029
	NZY-18	F-18D1	1.4858	0.0769	0.0233	1.5860	0.1559	0.0070	0.0023	0.1652	1.0805	0.0210	0.0093	1.1108	0.2550	0.0188	0.0081	0.2819	0.2820	0.0107	-	0.2927
	NZY-29	F-29D1	0.2273	0.0118	0.0036	0.2427	0.0239	0.0011	0.0004	0.0254	0.1653	0.0032	0.0014	0.1699	0.0026	0.0002	0.0001	0.0029	0.0028	0.0001	-	0.0029
	NZY-36	F-36D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P3	P3D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P3D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P5	P5D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P5D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arrival	NZY-18	F-18A1	-	-	-	-	-	-	-	-	-	-	-	-	0.0123	0.0009	0.0004	0.0136	0.0136	0.0005	-	0.0141
		F-18A2	-	-	-	-	-	-	-	-	-	-	-	-	0.0005	-	-	0.0005	0.0007	-	-	0.0007
		F-18A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29A1	0.1803	0.0125	0.0034	0.1962	0.0177	0.0010	0.0005	0.0192	0.2124	0.0043	-	0.2167	0.0442	0.0033	0.0014	0.0489	0.0504	0.0019	-	0.0523
		F-29A2	0.1803	0.0125	0.0034	0.1962	0.0177	0.0010	0.0005	0.0192	0.2124	0.0043	-	0.2167	0.0442	0.0033	0.0014	0.0489	0.0504	0.0019	-	0.0523
		F-29A3	0.1803	0.0125	0.0034	0.1962	0.0177	0.0010	0.0005	0.0192	0.2124	0.0043	-	0.2167	0.0442	0.0033	0.0014	0.0489	0.0504	0.0019	-	0.0523
		F-29A4	0.1803	0.0125	0.0034	0.1962	0.0177	0.0010	0.0005	0.0192	0.2124	0.0043	-	0.2167	0.0442	0.0033	0.0014	0.0489	0.0504	0.0019	-	0.0523
	NZY-36	F-36A1	0.3090	0.0214	0.0058	0.3362	0.0305	0.0016	0.0008	0.0329	0.3641	0.0074	-	0.3715	0.0705	0.0052	0.0022	0.0779	0.0719	0.0027	-	0.0746
	NZY-P10	P10A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P10A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P6	P6A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P6A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Break Arrival	NZY-18	F-18O1	0.0148	-	-	0.0148	0.0016	-	-	0.0016	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29O1	0.7304	-	-	0.7304	0.0805	-	-	0.0805	0.0438	0.0247	-	0.0685	-	-	-	-	-	-	-	-
Touch and Go	NZY-29	F-29T1	0.0479	-	-	0.0479	0.0055	-	-	0.0055	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box	NZY-29	FR-29G1	0.1041	0.0274	0.0110	0.1425	0.0110	0.0027	0.0014	0.0151	-	-	-	-	0.0329	0.0041	-	0.0370	0.0356	0.0041	-	0.0397
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Departure			1.7480	0.0905	0.0274	1.8659	0.1835	0.0083	0.0028	0.1946	1.2712	0.0247	0.0109	1.3068	0.2602	0.0192	0.0083	0.2877	0.2876	0.0109	-	0.2985
Interfacility Departure																						
Arrival			1.0302	0.0714	0.0194	1.1210	0.1013	0.0056	0.0028	0.1097	1.2137	0.0246	-	1.2383	0.2601	0.0193	0.0082	0.2876	0.2878	0.0108	-	0.2986
Break Arrival			0.7452	-	-	0.7452	0.0821	-	-	0.0821	0.0438	0.0247	-	0.0685	-	-	-	-	-	-	-	-
Interfacility Arrival																						
Touch and Go			0.0479	-	-	0.0479	0.0055	-	-	0.0055	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box			0.1041	0.0274	0.0110	0.1425	0.0110	0.0027	0.0014	0.0151	-	-	-	-	0.0329	0.0041	-	0.0370	0.0356	0.0041	-	0.0397
FCF Pattern			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL			3.6754	0.1893	0.0578	3.9225	0.3834	0.0166	0.0070	0.4070	2.5287	0.0740	0.0109	2.6136	0.5532	0.0426	0.0165	0.6123	0.6110	0.0258	-	0.6368

Table 5 Modeled Average Daily Flight Events for Baseline at NAS North Island

(a) All Modeled Types Except H-60 (continued)

Operation Type	Runway/ Pad	Flight Track	Citation 550				Lear 25				Lear 35				C-40				C-130H				C-2			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	3.7662	0.0703	-	3.8365	0.0161	-	-	0.0161	0.0785	-	-	0.0785	0.1248	0.0031	0.0019	0.1298	0.0471	0.0018	-	0.0489	0.0510	0.0039	0.0003	0.0552
	NZY-18	F-18D1	0.1189	0.0022	-	0.1211	0.6834	-	-	0.6834	3.3362	-	-	3.3362	3.9535	0.0989	0.0599	4.1123	1.4913	0.0573	-	1.5486	2.1704	0.1653	0.0116	2.3473
	NZY-29	F-29D1	0.0793	0.0015	-	0.0808	0.1045	-	-	0.1045	0.5102	-	-	0.5102	0.0833	0.0021	0.0013	0.0867	0.0314	0.0012	-	0.0326	0.3320	0.0253	0.0018	0.3591
	NZY-36	F-36D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P3	P3D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P3D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P5	P5D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P5D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arrival	NZY-18	F-18A1	0.1867	0.0049	-	0.1916	-	-	-	-	-	-	-	-	0.1919	0.0079	0.0059	0.2057	0.0745	0.0029	-	0.0774	-	-	-	-
		F-18A2	0.0098	0.0003	-	0.0101	-	-	-	-	-	-	-	-	0.0101	0.0004	0.0003	0.0108	0.0039	0.0002	-	0.0041	-	-	-	-
		F-18A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29A1	0.6880	0.0182	-	0.7062	0.1407	-	-	0.1407	0.6869	-	-	0.6869	0.7072	0.0292	0.0216	0.7580	0.2719	0.0104	-	0.2823	0.4004	0.0192	0.0019	0.4215
		F-29A2	0.6880	0.0182	-	0.7062	0.1407	-	-	0.1407	0.6869	-	-	0.6869	0.7072	0.0292	0.0216	0.7580	0.2719	0.0104	-	0.2823	0.4004	0.0192	0.0019	0.4215
		F-29A3	0.6880	0.0182	-	0.7062	0.1407	-	-	0.1407	0.6869	-	-	0.6869	0.7072	0.0292	0.0216	0.7580	0.2719	0.0104	-	0.2823	0.4004	0.0192	0.0019	0.4215
		F-29A4	0.6880	0.0182	-	0.7062	0.1407	-	-	0.1407	0.6869	-	-	0.6869	0.7072	0.0292	0.0216	0.7580	0.2719	0.0104	-	0.2823	0.4004	0.0192	0.0019	0.4215
	NZY-36	F-36A1	0.9829	0.0260	-	1.0089	0.2411	-	-	0.2411	1.1775	-	-	1.1775	1.0103	0.0418	0.0308	1.0829	0.4038	0.0155	-	0.4193	0.6862	0.0329	0.0033	0.7224
	NZY-P10	P10A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P10A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P6	P6A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P6A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Break Arrival	NZY-18	F-18O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0062	0.0008	-	0.0070
	NZY-29	F-29O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3061	0.0403	-	0.3464
Touch and Go	NZY-29	F-29T1	0.0082	-	-	0.0082	0.1171	-	-	0.1171	0.5719	-	-	0.5719	0.3836	0.0589	0.0493	0.4918	-	-	-	-	0.2384	0.0123	-	0.2507
GCA Box	NZY-29	FR-29G1	0.2164	-	-	0.2164	0.3554	-	-	0.3554	1.7350	-	-	1.7350	-	-	-	-	0.0534	0.0178	-	0.0712	0.6370	0.0616	-	0.6986
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Departure			3.9644	0.0740	-	4.0384	0.8040	-	-	0.8040	3.9249	-	-	3.9249	4.1616	0.1041	0.0631	4.3288	1.5698	0.0603	-	1.6301	2.5534	0.1945	0.0137	2.7616
Interfacility Departure																										
Arrival			3.9314	0.1040	-	4.0354	0.8039	-	-	0.8039	3.9251	-	-	3.9251	4.0411	0.1669	0.1234	4.3314	1.5698	0.0602	-	1.6300	2.2878	0.1097	0.0109	2.4084
Break Arrival			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3123	0.0411	-	0.3534
Interfacility Arrival																										
Touch and Go			0.0082	-	-	0.0082	0.1171	-	-	0.1171	0.5719	-	-	0.5719	0.3836	0.0589	0.0493	0.4918	-	-	-	-	0.2384	0.0123	-	0.2507
GCA Box			0.2164	-	-	0.2164	0.3554	-	-	0.3554	1.7350	-	-	1.7350	-	-	-	-	0.0534	0.0178	-	0.0712	0.6370	0.0616	-	0.6986
FCF Pattern			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL			8.1204	0.1780	-	8.2984	2.0804	-	-	2.0804	10.1569	-	-	10.1569	8.5863	0.3299	0.2358	9.1520	3.1930	0.1383	-	3.3313	6.0289	0.4192	0.0246	6.4727

Table 5 Modeled Average Daily Flight Events for Baseline at NAS North Island

(a) All Modeled Types Except H-60 (concluded)

Operation Type	Runway/ Pad	Flight Track	E-2				C-12 (C-12/C-26)				Cessna 210				P-3				Cessna 172				H-53/H-3			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	0.0104	-	-	0.0104	0.0798	0.0037	0.0010	0.0845	-	-	-	-	0.0521	0.0020	0.0011	0.0552	-	-	-	-	-	-	-	-
	NZY-18	F-18D1	0.4424	-	-	0.4424	2.5271	0.1171	0.0312	2.6754	0.8757	0.0233	-	0.8990	2.1825	0.0838	0.0442	2.3105	8.6281	0.0745	-	8.7026	-	-	-	-
	NZY-29	F-29D1	0.0678	-	-	0.0678	0.0533	0.0025	0.0007	0.0565	0.0205	0.0005	-	0.0210	0.3353	0.0129	0.0068	0.3550	0.2031	0.0018	-	0.2049	-	-	-	-
	NZY-36	F-36D1	-	-	-	-	-	-	-	-	0.1339	0.0036	-	0.1375	-	-	-	-	1.3195	0.0114	-	1.3309	-	-	-	-
	NZY-P3	P3D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1469	0.0312	-	0.1781
		P3D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1469	0.0312	-	0.1781
	NZY-P5	P5D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0791	0.0168	-	0.0959
		P5D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0791	0.0168	-	0.0959
Arrival	NZY-18	F-18A1	-	-	-	-	0.1285	0.0039	0.0013	0.1337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		F-18A2	-	-	-	-	0.0068	0.0002	0.0001	0.0071	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		F-18A3	-	-	-	-	-	-	-	-	0.2093	0.0022	-	0.2115	-	-	-	-	2.0389	0.0088	-	2.0477	-	-	-	-
	NZY-29	F-29A1	0.0911	-	-	0.0911	0.4688	0.0142	0.0047	0.4877	0.2093	0.0022	-	0.2115	0.4491	0.0177	0.0086	0.4754	2.0389	0.0088	-	2.0477	-	-	-	-
		F-29A2	0.0911	-	-	0.0911	0.4688	0.0142	0.0047	0.4877	0.2093	0.0022	-	0.2115	0.4491	0.0177	0.0086	0.4754	2.0389	0.0088	-	2.0477	-	-	-	-
		F-29A3	0.0911	-	-	0.0911	0.4688	0.0142	0.0047	0.4877	0.2093	0.0022	-	0.2115	0.4491	0.0177	0.0086	0.4754	2.0389	0.0088	-	2.0477	-	-	-	-
		F-29A4	0.0911	-	-	0.0911	0.4688	0.0142	0.0047	0.4877	0.2093	0.0022	-	0.2115	0.4491	0.0177	0.0086	0.4754	2.0389	0.0088	-	2.0477	-	-	-	-
	NZY-36	F-36A1	0.1562	-	-	0.1562	0.6963	0.0211	0.0070	0.7244	-	-	-	-	0.7735	0.0305	0.0148	0.8188	-	-	-	-	-	-	-	-
	NZY-P10	P10A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1469	0.0312	-	0.1781
		P10A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1469	0.0312	-	0.1781
	NZY-P6	P6A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0791	0.0168	-	0.0959
		P6A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0791	0.0168	-	0.0959
Break Arrival	NZY-18	F-18O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-
	NZY-29	F-29O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Touch and Go	NZY-29	F-29T1	-	-	-	-	0.2849	-	-	0.2849	0.0082	-	-	0.0082	-	-	-	-	0.0521	-	-	0.0521	-	-	-	-
GCA Box	NZY-29	FR-29G1	0.0452	-	-	0.0452	0.2247	0.0219	0.0014	0.2480	0.1548	0.0041	-	0.1589	0.0452	0.0178	0.0534	0.1164	0.0411	0.0753	-	0.1164	0.0055	0.0041	-	0.0096
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Departure			0.5206	-	-	0.5206	2.6602	0.1233	0.0329	2.8164	1.0301	0.0274	-	1.0575	2.5699	0.0987	0.0521	2.7207	10.1507	0.0877	-	10.2384	0.4520	0.0960	-	0.5480
Interfacility Departure																										
Arrival			0.5206	-	-	0.5206	2.7068	0.0820	0.0272	2.8160	1.0465	0.0110	-	1.0575	2.5699	0.1013	0.0492	2.7204	10.1945	0.0440	-	10.2385	0.4520	0.0960	-	0.5480
Break Arrival			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interfacility Arrival																										
Touch and Go			-	-	-	-	0.2849	-	-	0.2849	0.0082	-	-	0.0082	-	-	-	-	0.0521	-	-	0.0521	-	-	-	-
GCA Box			0.0452	-	-	0.0452	0.2247	0.0219	0.0014	0.2480	0.1548	0.0041	-	0.1589	0.0452	0.0178	0.0534	0.1164	0.0411	0.0753	-	0.1164	0.0055	0.0041	-	0.0096
FCF Pattern			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL			1.0864	-	-	1.0864	5.8766	0.2272	0.0615	6.1653	2.2396	0.0425	-	2.2821	5.1850	0.2178	0.1547	5.5575	20.4384	0.2070	-	20.6454	0.9095	0.1961	-	1.1056

Table 5 Modeled Average Daily Flight Events for Baseline at NAS North Island
(b) H-60 and Grand Total Only

Operation Type	Runway/ Pad	Flight Track	H-60				Total			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	-	-	-	-	4.2954	0.0876	0.0052	4.3882
	NZY-18	F-18D1	-	-	-	-	29.6687	0.7568	0.1899	30.6154
	NZY-29	F-29D1	-	-	-	-	2.2426	0.0642	0.0161	2.3229
	NZY-36	F-36D1	-	-	-	-	1.4534	0.0150	-	1.4684
	NZY-P3	P3D1	11.3518	1.5003	0.1772	13.0293	11.4987	1.5315	0.1772	13.2074
		P3D4	11.3518	1.5003	0.1772	13.0293	11.4987	1.5315	0.1772	13.2074
	NZY-P5	P5D1	6.1126	0.8079	0.0954	7.0159	6.1917	0.8247	0.0954	7.1118
		P5D4	6.1126	0.8079	0.0954	7.0159	6.1917	0.8247	0.0954	7.1118
Interfacility Departure	NZY-P3	P3D2-27	7.4485	0.9854	0.1164	8.5503	7.4485	0.9854	0.1164	8.5503
		P3D2-P1	1.3035	0.1724	0.0204	1.4963	1.3035	0.1724	0.0204	1.4963
		P3D2-P2	2.7932	0.3695	0.0436	3.2063	2.7932	0.3695	0.0436	3.2063
		P3D2-P3	1.1173	0.1478	0.0175	1.2826	1.1173	0.1478	0.0175	1.2826
		P3D2-P4	2.7932	0.3695	0.0436	3.2063	2.7932	0.3695	0.0436	3.2063
		P3D2-P5	1.1173	0.1478	0.0175	1.2826	1.1173	0.1478	0.0175	1.2826
		P3D3-27	0.7448	0.0985	0.0116	0.8549	0.7448	0.0985	0.0116	0.8549
		P3D3-P1	0.1862	0.0246	0.0029	0.2137	0.1862	0.0246	0.0029	0.2137
		P3D3-P2	0.3724	0.0493	0.0058	0.4275	0.3724	0.0493	0.0058	0.4275
		P3D3-P3	0.1862	0.0246	0.0029	0.2137	0.1862	0.0246	0.0029	0.2137
		P3D3-P4	0.3724	0.0493	0.0058	0.4275	0.3724	0.0493	0.0058	0.4275
		P3D3-P5	0.1862	0.0246	0.0029	0.2137	0.1862	0.0246	0.0029	0.2137
	NZY-P5	P5D2-27	3.9828	0.5269	0.0622	4.5719	3.9828	0.5269	0.0622	4.5719
		P5D2-P1	0.6970	0.0922	0.0109	0.8001	0.6970	0.0922	0.0109	0.8001
		P5D2-P2	1.4935	0.1976	0.0233	1.7144	1.4935	0.1976	0.0233	1.7144
		P5D2-P3	0.5974	0.0790	0.0093	0.6857	0.5974	0.0790	0.0093	0.6857
		P5D2-P4	1.4935	0.1976	0.0233	1.7144	1.4935	0.1976	0.0233	1.7144
		P5D2-P5	0.5974	0.0790	0.0093	0.6857	0.5974	0.0790	0.0093	0.6857
		P5D3-27	0.3983	0.0527	0.0062	0.4572	0.3983	0.0527	0.0062	0.4572
		P5D3-P1	0.0996	0.0132	0.0016	0.1144	0.0996	0.0132	0.0016	0.1144
		P5D3-P2	0.1991	0.0263	0.0031	0.2285	0.1991	0.0263	0.0031	0.2285
		P5D3-P3	0.0996	0.0132	0.0016	0.1144	0.0996	0.0132	0.0016	0.1144
		P5D3-P4	0.2987	0.0395	0.0047	0.3429	0.2987	0.0395	0.0047	0.3429
Arrival	NZY-18	F-18A1	-	-	-	-	0.6075	0.0210	0.0076	0.6361
		F-18A2	-	-	-	-	0.0318	0.0011	0.0004	0.0333
		F-18A3	-	-	-	-	2.2482	0.0110	-	2.2592
	NZY-29	F-29A1	-	-	-	-	6.6573	0.1429	0.0421	6.8423
		F-29A2	-	-	-	-	6.6573	0.1429	0.0421	6.8423
		F-29A3	-	-	-	-	6.6573	0.1429	0.0421	6.8423
		F-29A4	-	-	-	-	6.6573	0.1429	0.0421	6.8423
	NZY-36	F-36A1	-	-	-	-	6.9738	0.2061	0.0647	7.2446
	NZY-P10	P10A1	10.9271	1.8004	0.3027	13.0302	11.0741	1.8316	0.3027	13.2084
		P10A4	10.9271	1.8004	0.3027	13.0302	11.0741	1.8316	0.3027	13.2084
	NZY-P6	P6A1	5.8838	0.9694	0.1630	7.0162	5.9629	0.9862	0.1630	7.1121
		P6A4	5.8838	0.9694	0.1630	7.0162	5.9629	0.9862	0.1630	7.1121
Break Arrival	NZY-18	F-18O1	-	-	-	-	0.0226	0.0008	-	0.0234
	NZY-29	F-29O1	-	-	-	-	1.1608	0.0650	-	1.2258

Table 5 Modeled Average Daily Flight Events for Baseline at NAS North Island
(b) H-60 and Grand Total Only (concluded)

Operation Type	Runway/ Pad	Flight Track	H-60				Total			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Interfacility Arrival	NZY-P10	27D2-P10	6.2942	1.0374	0.1743	7.5059	6.2942	1.0374	0.1743	7.5059
		27D3-P10	1.5735	0.2594	0.0436	1.8765	1.5735	0.2594	0.0436	1.8765
		P1D2-P10	1.1444	0.1886	0.0317	1.3647	1.1444	0.1886	0.0317	1.3647
		P1D3-P10	0.2861	0.0472	0.0079	0.3412	0.2861	0.0472	0.0079	0.3412
		P2D2-P10	2.4319	0.4008	0.0673	2.9000	2.4319	0.4008	0.0673	2.9000
		P2D3-P10	0.6080	0.1002	0.0168	0.7250	0.6080	0.1002	0.0168	0.7250
		P3D2-P10	1.0014	0.1650	0.0277	1.1941	1.0014	0.1650	0.0277	1.1941
		P3D3-P10	0.2503	0.0413	0.0069	0.2985	0.2503	0.0413	0.0069	0.2985
		P4D2-P10	2.4319	0.4008	0.0673	2.9000	2.4319	0.4008	0.0673	2.9000
		P4D3-P10	0.6080	0.1002	0.0168	0.7250	0.6080	0.1002	0.0168	0.7250
		P5D2-P10	1.0014	0.1650	0.0277	1.1941	1.0014	0.1650	0.0277	1.1941
		P5D3-P10	0.2503	0.0413	0.0069	0.2985	0.2503	0.0413	0.0069	0.2985
	NZY-P6	27D2-P6	2.7537	0.4539	0.0762	3.2838	2.7537	0.4539	0.0762	3.2838
		27D3-P6	0.8473	0.1397	0.0235	1.0105	0.8473	0.1397	0.0235	1.0105
		27D5-P6	0.6355	0.1047	0.0176	0.7578	0.6355	0.1047	0.0176	0.7578
		P1D2-P6	0.5007	0.0825	0.0139	0.5971	0.5007	0.0825	0.0139	0.5971
		P1D3-P6	0.1541	0.0254	0.0043	0.1838	0.1541	0.0254	0.0043	0.1838
		P1D5-P6	0.1156	0.0191	0.0032	0.1379	0.1156	0.0191	0.0032	0.1379
		P2D2-P6	1.0639	0.1754	0.0295	1.2688	1.0639	0.1754	0.0295	1.2688
		P2D3-P6	0.3274	0.0540	0.0091	0.3905	0.3274	0.0540	0.0091	0.3905
		P2D5-P6	0.2454	0.0405	0.0068	0.2927	0.2454	0.0405	0.0068	0.2927
		P3D2-P6	0.4381	0.0722	0.0121	0.5224	0.4381	0.0722	0.0121	0.5224
		P3D3-P6	0.1348	0.0222	0.0037	0.1607	0.1348	0.0222	0.0037	0.1607
		P3D5-P6	0.1011	0.0167	0.0028	0.1206	0.1011	0.0167	0.0028	0.1206
		P4D2-P6	1.0639	0.1754	0.0295	1.2688	1.0639	0.1754	0.0295	1.2688
		P4D3-P6	0.3274	0.0540	0.0091	0.3905	0.3274	0.0540	0.0091	0.3905
		P4D5-P6	0.2454	0.0405	0.0068	0.2927	0.2454	0.0405	0.0068	0.2927
		P5D2-P6	0.4381	0.0722	0.0121	0.5224	0.4381	0.0722	0.0121	0.5224
		P5D3-P6	0.1348	0.0222	0.0037	0.1607	0.1348	0.0222	0.0037	0.1607
		P5D5-P6	0.1011	0.0167	0.0028	0.1206	0.1011	0.0167	0.0028	0.1206
Touch and Go	NZY-29	F-29T1	-	-	-	-	1.7178	0.0712	0.0493	1.8383
GCA Box	NZY-29	FR-29G1	10.3767	0.9507	0.1164	11.4438	14.0740	1.1916	0.1836	15.4492
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-
Departure			34.9288	4.6164	0.5452	40.0904	73.0409	5.6360	0.7564	79.4333
Interfacility Departure			28.5781	3.7805	0.4464	32.8050	28.5781	3.7805	0.4464	32.8050
Arrival			33.6218	5.5396	0.9314	40.0928	70.5645	6.4464	1.1725	78.1834
Break Arrival			-	-	-	-	1.1834	0.0658	-	1.2492
Interfacility Arrival			27.5097	4.5345	0.7616	32.8058	27.5097	4.5345	0.7616	32.8058
Touch and Go			-	-	-	-	1.7178	0.0712	0.0493	1.8383
GCA Box			10.3767	0.9507	0.1164	11.4438	14.0740	1.1916	0.1836	15.4492
FCF Pattern			-	-	-	-	-	-	-	-
GRAND TOTAL			135.0151	19.4217	2.8010	157.2378	216.6684	21.7260	3.3698	241.7642

Table 6 Modeled Average Daily Daytime, Evening and Nighttime Runway and Flight Track Utilization Percentages and Average Daily Flight Events for Baseline at NOLF Imperial Beach

Operation Type	Runway/ Pad	Runway/ Pad Utilization	Flight Track ID	Flight Track Description	Type 1	Type 1 Utilization	Type 2	Type 2 Utilization	Track Utilization	H-60			
										0700-1900	1900-2200	2200-0700	Total
Departure	NRS-27	100%	IB-27D1	H-60 Border Departure from OLF IB Runway 27						4.2493	8.8904	0.1479	13.2876
Interfacility Departure	NRS-27	45%	27D2-P6	H-60 Channel Departure from OLF IB Runway 27 to NASNI Pad 6	to Pad 6	40%	Channel	55%	100%	2.7537	0.4539	0.0762	3.2838
			27D3-P6	H-60 Bay Departure from OLF IB Runway 27 to NASNI Pad 6			Bay	23%		1.0639	0.1754	0.0295	1.2688
			27D5-P6	H-60 Surf Departure from OLF IB Runway 27 to NASNI Pad 6			Surf	22%		1.0639	0.1754	0.0295	1.2688
			27D2-P10	H-60 Channel Departure from OLF IB Runway 27 to NASNI Pad 10	to Pad 10	60%	Channel	85%		6.2942	1.0374	0.1743	7.5059
			27D3-P10	H-60 Bay Departure from OLF IB Runway 27 to NASNI Pad 10			Bay	15%		1.0014	0.1650	0.0277	1.1941
	NRS-P1	12%	P1D2-P6	H-60 Channel Departure from OLF IB Pad 1 to NASNI Pad 6	to Pad 6	45%	Channel	56%	100%	0.8473	0.1397	0.0235	1.0105
			P1D3-P6	H-60 Bay Departure from OLF IB Pad 1 to NASNI Pad 6			Bay	22%		0.3274	0.0540	0.0091	0.3905
			P1D5-P6	H-60 Surf Departure from OLF IB Pad 1 to NASNI Pad 6			Surf	22%		0.3274	0.0540	0.0091	0.3905
			P1D2-P10	H-60 Channel Departure from OLF IB Pad 1 to NASNI Pad 10	to Pad 10	55%	Channel	85%		1.5735	0.2594	0.0436	1.8765
			P1D3-P10	H-60 Bay Departure from OLF IB Pad 1 to NASNI Pad 10			Bay	15%		0.2503	0.0413	0.0069	0.2985
	NRS-P2	17%	P2D2-P6	H-60 Channel Departure from OLF IB Pad 2 to NASNI Pad 6	to Pad 6	25%	Channel	60%	100%	0.6355	0.1047	0.0176	0.7578
			P2D3-P6	H-60 Bay Departure from OLF IB Pad 2 to NASNI Pad 6			Bay	20%		0.2454	0.0405	0.0068	0.2927
			P2D5-P6	H-60 Surf Departure from OLF IB Pad 2 to NASNI Pad 6			Surf	20%		0.2454	0.0405	0.0068	0.2927
			P2D2-P10	H-60 Channel Departure from OLF IB Pad 2 to NASNI Pad 10	to Pad 10	75%	Channel	30%		1.1444	0.1886	0.0317	1.3647
			P2D3-P10	H-60 Bay Departure from OLF IB Pad 2 to NASNI Pad 10			Bay	70%		2.4319	0.4008	0.0673	2.9000
	NRS-P3	8%	P3D2-P6	H-60 Channel Departure from OLF IB Pad 3 to NASNI Pad 6	to Pad 6	60%	Channel	37%	100%	0.5007	0.0825	0.0139	0.5971
			P3D3-P6	H-60 Bay Departure from OLF IB Pad 3 to NASNI Pad 6			Bay	32%		0.4381	0.0722	0.0121	0.5224
			P3D5-P6	H-60 Surf Departure from OLF IB Pad 3 to NASNI Pad 6			Surf	31%		0.4381	0.0722	0.0121	0.5224
			P3D2-P10	H-60 Channel Departure from OLF IB Pad 3 to NASNI Pad 10	to Pad 10	40%	Channel	33%		0.2861	0.0472	0.0079	0.3412
			P3D3-P10	H-60 Bay Departure from OLF IB Pad 3 to NASNI Pad 10			Bay	67%		0.6080	0.1002	0.0168	0.7250
	NRS-P4	14%	P4D2-P6	H-60 Channel Departure from OLF IB Pad 4 to NASNI Pad 6	to Pad 6	10%	Channel	40%	100%	0.1541	0.0254	0.0043	0.1838
			P4D3-P6	H-60 Bay Departure from OLF IB Pad 4 to NASNI Pad 6			Bay	30%		0.1348	0.0222	0.0037	0.1607
			P4D5-P6	H-60 Surf Departure from OLF IB Pad 4 to NASNI Pad 6			Surf	30%		0.1348	0.0222	0.0037	0.1607
			P4D2-P10	H-60 Channel Departure from OLF IB Pad 4 to NASNI Pad 10	to Pad 10	90%	Channel	70%		2.4319	0.4008	0.0673	2.9000
			P4D3-P10	H-60 Bay Departure from OLF IB Pad 4 to NASNI Pad 10			Bay	30%		1.0014	0.1650	0.0277	1.1941
	NRS-P5	4%	P5D2-P6	H-60 Channel Departure from OLF IB Pad 5 to NASNI Pad 6	to Pad 6	30%	Channel	33%	100%	0.1156	0.0191	0.0032	0.1379
			P5D3-P6	H-60 Bay Departure from OLF IB Pad 5 to NASNI Pad 6			Bay	33%		0.1011	0.0167	0.0028	0.1206
			P5D5-P6	H-60 Surf Departure from OLF IB Pad 5 to NASNI Pad 6			Surf	34%		0.1011	0.0167	0.0028	0.1206
			P5D2-P10	H-60 Channel Departure from OLF IB Pad 5 to NASNI Pad 10	to Pad 10	70%	Channel	70%		0.6080	0.1002	0.0168	0.7250
			P5D3-P10	H-60 Bay Departure from OLF IB Pad 5 to NASNI Pad 10			Bay	30%		0.2503	0.0413	0.0069	0.2985
Arrival	NRS-27	100%	IB-27A1	H-60 West Arrival to OLF IB Runway 27						0.4590	1.4593	0.0748	1.9931
			IB-27A2	H-60 East Arrival to OLF IB Runway 27						0.4590	1.4593	0.0748	1.9931
			IB-27A3	H-60 PAR Arrival to OLF IB Runway 27						2.1422	6.8101	0.3490	9.3013
Interfacility Arrival	NRS-27	44%	P5D2-27	H-60 Channel Departure from NASNI Pad 5 to OLF IB Runway 27	from Pad 5	35%	Channel	90%	100%	3.9828	0.5269	0.0622	4.5719
			P5D3-27	H-60 Bay Departure from NASNI Pad 5 to OLF IB Runway 27			Bay	10%		0.3983	0.0527	0.0062	0.4572
			P3D2-27	H-60 Channel Departure from NASNI Pad 3 to OLF IB Runway 27	from Pad 3	65%	Channel	90%		7.4485	0.9854	0.1164	8.5503
			P3D3-27	H-60 Bay Departure from NASNI Pad 3 to OLF IB Runway 27			Bay	10%		0.7448	0.0985	0.0116	0.8549
	NRS-P1	8%	P5D2-P1	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 1	from Pad 5	35%	Channel	85%	100%	0.6970	0.0922	0.0109	0.8001
			P5D3-P1	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 1			Bay	15%		0.0996	0.0132	0.0016	0.1144
			P3D2-P1	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 1	from Pad 3	65%	Channel	90%		1.3035	0.1724	0.0204	1.4963
			P3D3-P1	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 1			Bay	10%		0.1862	0.0246	0.0029	0.2137
	NRS-P2	17%	P5D2-P2	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 2	from Pad 5	35%	Channel	90%	100%	1.4935	0.1976	0.0233	1.7144
			P5D3-P2	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 2			Bay	10%		0.1991	0.0263	0.0031	0.2285
			P3D2-P2	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 2	from Pad 3	65%	Channel	90%		2.7932	0.3695	0.0436	3.2063
			P3D3-P2	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 2			Bay	10%		0.3724	0.0493	0.0058	0.4275
	NRS-P3	7%	P5D2-P3	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 3	from Pad 5	35%	Channel	85%	100%	0.5974	0.0790	0.0093	0.6857
			P5D3-P3	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 3			Bay	15%		0.0996	0.0132	0.0016	0.1144
			P3D2-P3	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 3	from Pad 3	65%	Channel	85%		1.1173	0.1478	0.0175	1.2826
			P3D3-P3	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 3			Bay	15%		0.1862	0.0246	0.0029	0.2137
	NRS-P4	17%	P5D2-P4	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 4	from Pad 5	35%	Channel	80%	100%	1.4935	0.1976	0.0233	1.7144
			P5D3-P4	H-60 Bay Departure from NASNI Pad 5 to OLF IB Pad 4			Bay	20%		0.2987	0.0395	0.0047	0.3429
			P3D2-P4	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 4	from Pad 3	65%	Channel	90%		2.7932	0.3695	0.0436	3.2063
			P3D3-P4	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 4			Bay	10%		0.3724	0.0493	0.0058	0.4275
	NRS-P5	7%	P5D2-P5	H-60 Channel Departure from NASNI Pad 5 to OLF IB Pad 5	from Pad 5	30%	Channel	100%	100%	0.5974	0.0790	0.0093	0.6857
			P3D2-P5	H-60 Channel Departure from NASNI Pad 3 to OLF IB Pad 5	from Pad 3	70%	Channel	85%		1.1173	0.1478	0.0175	1.2826
			P3D3-P5	H-60 Bay Departure from NASNI Pad 3 to OLF IB Pad 5			Bay	15%		0.1862	0.0246	0.0029	0.2137
Touch and Go	NRS-27	44%	IB-27T1	H-60 Touch and Go at OLF IB Runway 27						90.7455	36.2982	2.5924	129.6361
	NRS-P1	8%	IB-P1T1	H-60 Touch and Go at OLF IB Pad 1						16.4992	6.5997	0.4713	23.5702
	NRS-P2	17%	IB-P2T1	H-60 Touch and Go at OLF IB Pad 2						35.0608	14.0243	1.0016	50.0867
	NRS-P3	7%	IB-P3T1	H-60 Touch and Go at OLF IB Pad 3						14.4368	5.7747	0.4124	20.6239
	NRS-P4	17%	IB-P4T1	H-60 Touch and Go at OLF IB Pad 4						35.0608	14.0243	1.0016	50.0867
	NRS-P5	7%	IB-P5T1	H-60 Touch and Go at OLF IB Pad 5						14.4368	5.7747	0.4124	20.6239
Departure										4.2493	8.8904	0.1479	13.2876
Interfacility Departure										27.5097	4.5345	0.7616	32.8058
Arrival										3.0602	9.7287	0.4986	13.2875
Interfacility Arrival										28.5781	3.7805	0.4464	32.8050
Touch and Go										206.2399	82.4959	5.8917	294.6275
GRAND TOTAL										269.6372	109.4300	7.7462	386.8134

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

(a) Naval Depot (NADEP) Page 1 of 8

Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
C-2A (5)	T56-A-425 (2) (Modeled as T56-A-427)	1,2	***Inbound***												
			Low Power (3 per AC)	Spots 13-15 (Spot 14)	291	100%	15	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	40	2	
			Prop Balance (2 each prop)	Spots 13-15 (Spot 14)	291	100%	10	100%	0%	0%	APU	*not modeled*	10	1	
											1,500 SHP	1,500 SHP	15	1	left
											APU	*not modeled*	10	1	
											1,500 SHP	1,500 SHP	15	1	right
			High Power (2 per AC)	Spots 13-15 (Spot 14)	291	100%	10	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	5	1	
											4,600 SHP	4,600 SHP	5	1	left
											HSGI	380 ISHP-Ground Idle	5	1	right
											HSGI	380 ISHP-Ground Idle	5	1	left
											4,600 SHP	4,600 SHP	5	1	right
		1,2	***Outbound***												
			Depres oil (1 per AC)	Spots 13-15 (Spot 14)	291	100%	5	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	10	2	
			Systems Checks (6 per AC)	Spots 13-15 (Spot 14)	291	100%	30	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	40	2	
			Low Power (35 per AC)	Spots 13-15 (Spot 14)	291	100%	175	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	40	2	
			Prop Balance (3each prop)	Spots 13-15 (Spot 14)	291	100%	15	100%	0%	0%	APU	*not modeled*	10	1	
											1,500 SHP	1,500 SHP	15	1	left
											APU	*not modeled*	10	1	
											1,500 SHP	1,500 SHP	15	1	right
			High Power (30 per AC)	Spots 13-15 (Spot 14)	291	100%	150	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	5	2	
											4,600 SHP	4,600 SHP	5	1	left
											HSGI	380 ISHP-Ground Idle	5	1	right
											HSGI	380 ISHP-Ground Idle	5	1	left
											4,600 SHP	4,600 SHP	5	1	right
			Max Power (2 per AC)	Spots 13-15 (Spot 14)	291	100%	10	100%	0%	0%	APU	*not modeled*	10	1	
											HSGI	380 ISHP-Ground Idle	5	2	
											4,600 SHP	4,600 SHP	0.5	2	
E-2C (6)	T56-A-427 (2)	2,3	***Inbound***												
			Low Power (3 per AC)	Spots 13-15 (Spot 14)	291	100%	18	100%	0%	0%	HSGI	380 ISHP-Ground Idle	40	2	
											LSGI	Low Ground Idle	2	2	
			Prop Balance (1 each prop)	Spots 13-15 (Spot 14)	291	100%	6	100%	0%	0%	HSGI	380 ISHP-Ground Idle	5	1	left
											1,500 SHP	1,500 SHP	15	1	left
											LSGI	Low Ground Idle	2	1	left
											HSGI	380 ISHP-Ground Idle	5	1	right
											1,500 SHP	1,500 SHP	15	1	right
											LSGI	Low Ground Idle	2	1	right
			High Power (2 per AC)	Spots 13-15 (Spot 14)	291	100%	12	100%	0%	0%	HSGI		5	2	
											5,100 SHP	5,100 SHP	5	1	left
											HSGI	380 ISHP-Ground Idle	5	1	right
											HSGI	380 ISHP-Ground Idle	5	1	left
											5,100 SHP	5,100 SHP	5	1	right
											LSGI	175 ISHP-Low Ground	2	2	
		2,3	***Outbound***												
			Depres oil (1 per AC)	Spots 13-15 (Spot 14)	291	100%	6	100%	0%	0%	HSGI	380 ISHP-Ground Idle	10	2	
											LSGI	Low Ground Idle	2	2	
			Systems Checks (6 per AC)	Spots 13-15 (Spot 14)	291	100%	36	100%	0%	0%	HSGI	380 ISHP-Ground Idle	40	2	
											LSGI	Low Ground Idle	2	2	
			Low Power (45 per AC)	Spots 13-15 (Spot 14)	291	100%	270	100%	0%	0%	HSGI	380 ISHP-Ground Idle	40	2	
											LSGI	Low Ground Idle	2	2	
			Prop Balance (3 each prop)	Spots 13-15 (Spot 14)	291	100%	18	100%	0%	0%	HSGI	380 ISHP-Ground Idle	5	1	left
											1,500 SHP	1,500 SHP	15	1	left
											LSGI	175 ISHP-Low Ground	2	1	left
											HSGI	380 ISHP-Ground Idle	5	1	right
											1,500 SHP	1,500 SHP	15	1	right
											LSGI	Low Ground Idle	2	1	right
			High Power (9 per AC)	Spots 13-15 (Spot 14)	291	100%	54	100%	0%	0%	HSGI	380 ISHP-Ground Idle	5	2	
											5,100 SHP	5,100 SHP	5	1	left
											HSGI	380 ISHP-Ground Idle	5	1	right
											HSGI	380 ISHP-Ground Idle	5	1	left
											5,100 SHP	5,100 SHP	5	1	right
											LSGI	175 ISHP-Low Ground	2	2	
			Max Power (2 per AC)	Spots 13-15 (Spot 14)	291	100%	12	100%	0%	0%	HSGI[3]	380 ISHP-Ground Idle	5	2	
											4,600 SHP	4,600 SHP	0.5	2	
											LSGI	175 ISHP-Low Ground	2	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

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Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
			Inbound												
CH-53E (9)	T64-GE-416 (3)	2,4,5,6	Ground Check (1 per AC)	H-53 spot	291	100%	9	100%	0%	0%	APU	*not modeled*	60	1	
											Flt Idle	1075 ISHP	60	3	
			Engine Pres (1 per AC)	H-53 spot	291	100%	9	100%	0%	0%	APU	*not modeled*	60	1	
											Gr Idle	380 ISHP	60	3	
			Outbound												
			Systems Checks	H-53 spot	291	100%	45	100%	0%	*0*	*APU*	*not modeled*	60	1	
			Low Speed Turn	H-53 spot	291	100%	45	100%	0%	0%	APU	*not modeled*	10	1	
											Gr Idle	380 ISHP	5	3	
			High Speed Turn	H-53 spot	291	100%	36	100%	0%	0%	APU	*not modeled*	10	1	
											Flt Idle	1075 ISHP	30	3	
			4 Point Plot (4 per AC)	H-53 spot	291	100%	36	100%	0%	0%	APU	*not modeled*	10	1	
											Flt Idle	1075 ISHP	30	3	
			Track & Balance	H-53 spot	291	100%	36	100%	0%	0%	APU	*not modeled*	10	1	
											Flt Idle	1075 ISHP	30	3	
			Hover Check (3 per AC)	H-53 spot	291		27	100%	0%	0%	APU	*not modeled*	10	1	
											Flt Idle	1075 ISHP	15	3	
				Taxi	291						25% Q	25% Q	3	3	
				Helo Pad 1	291						Flt Idle	1075 ISHP	1	3	
				Hover	291						68% Q	68% Q	60	3	
				Taxi	111						25% Q	25% Q	3	3	
				H-53 spot	291						Flt Idle	1075 ISHP	1	3	
			Inbound												
F/A-18A (9) F/A-18B (1) F/A-18C (41) F/A-18D (12)	F404-GE-400 (2) *or* F404-GE-402 (2)	2,7,8, 9,10	APU Test (2 per AC)	n/a	291	n/a	126				APU	*not modeled*	1	1	
			Leak Check (1 per AC)	Spots 1-3 (Spot 2)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
			Systems Checks (1 per AC) - low power (includes cross bleed check)	Spots 1-3 (Spot 2)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 4-6 (Spot 5)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 7-9 (Spot 8)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 10-12 (Spot 11)*	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
			Fuel Xfer Check (1 per AC) - medium power	Spots 1-3 (Spot 2)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
				Spots 4-6 (Spot 5)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
				Spots 7-9 (Spot 8)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
				Spots 10-12 (Spot 11)*	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

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Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
F/A-18A (9) F/A-18B (1) F/A-18C (41) F/A-18D (12)	F404-GE-400 (2) or F404-GE-402 (2)	2,7,8, 9,10	Eng Parameters (1 per AC) - high power	Spots 1-3 (Spot 2)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
				Spots 4-6 (Spot 5)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
				Spots 7-9 (Spot 8)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
				Spots 10-12 (Spot 11)*	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
			Engine Pres (1 per AC)	Spots 12 (Spot 11)*	291	100%	252	100%	0%	0%	APU	not modeled	1	1	
											Ground Idle	66% NC Idle	5	2	
			Outbound												
			Depres Oil (1 per AC) - low power	Spots 1-3 (Spot 2)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	63	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
			Leak Check (3 per AC) - low power	Spots 1-3 (Spot 2)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
			Systems Checks (3 per AC) - low power (includes Cross Bleed Check)	Spots 1-3 (Spot 2)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 4-6 (Spot 5)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 7-9 (Spot 8)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 10-12 (Spot 11)*	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

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Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
F/A-18A (9) F/A-18B (1) F/A-18C (41) F/A-18D (12)	F404-GE-400 (2) or F404-GE-402 (2)	*2,7,8, 9,10*	Fuel Xfer Check (3 per AC) - medium power	Spots 1-3 (Spot 2)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
				Spots 4-6 (Spot 5)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
				Spots 7-9 (Spot 8)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
				Spots 10-12 (Spot 11)*	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
			High Power (3 per AC) - includes Stall Check	Spots 1-3 (Spot 2)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**94% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**94% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	69% NC Idle	5	2	
											Ground Idle	66% NC Idle	5	2	
				Spots 4-6 (Spot 5)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**94% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**94% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	*69% NC Idle*	5	2	
											Ground Idle	66% NC Idle	5	2	
				Spots 7-9 (Spot 8)	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**94% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**94% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	69% NC Idle	5	2	
											Ground Idle	66% NC Idle	5	2	
				Spots 10-12 (Spot 11)*	291	25%	189	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**94% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**94% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**A/B**	0.083	1.000	left
											Flight Idle	69% NC Idle	0.083	1.000	right
											Flight Idle	*69% NC Idle*	5	2	
											Ground Idle	66% NC Idle	5	2	
			Flight Control Surfaces Sell (1 per AC)	Spots 1-3 (Spot 2)	291	25%	63	100%	0%	0%	Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)							Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)							Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*							Flight Idle	69% NC Idle	15	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

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Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
			Inbound												
F/A-18E (1) F/A-18F (2)	F414-GE-400 (2)	2,7,9, 10,11	APU Test (2 per AC)	n/a	291	n/a	6				APU	*not modeled*	1	1	
			Leak Check (1 per AC)	Spots 1-3 (Spot 2)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
			Systems Checks (1 per AC) - low power (includes cross bleed check)	Spots 1-3 (Spot 2)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 4-6 (Spot 5)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 7-9 (Spot 8)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 10-12 (Spot 11)*	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
			Fuel Xfer Check (1 per AC) - medium power	Spots 1-3 (Spot 2)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
				Spots 4-6 (Spot 5)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
				Spots 7-9 (Spot 8)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
				Spots 10-12 (Spot 11)*	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											75% N2	75% NC	6	2	
			Eng Parameters (1 per AC) - high power	Spots 1-3 (Spot 2)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
				Spots 4-6 (Spot 5)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
				Spots 7-9 (Spot 8)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
				Spots 10-12 (Spot 11)*	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	
											Flight Idle	69% NC Idle	5	2	
											80% N2	80% NC	30	1	left
											Flight Idle	69% NC Idle	30	1	right
											Flight Idle	69% NC Idle	30	1	left
											80% N2	80% NC	30	1	right
											Ground Idle	66% NC Idle	5	2	
			Engine Pres (1 per AC)	Spots 12 (Spot 11)*	291	100%	12	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	5	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

(a) Naval Depot (NADEP) Page 6 of 8

Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
			Outbound												
F/A-18E (1) F/A-18F (2)	F414-GE-400 (2)	*2,7,9, 10,11*	Depres Oil (1 per AC) - low power	Spots 1-3 (Spot 2)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	3	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
			Leak Check (3 per AC) - low power	Spots 1-3 (Spot 2)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	15	2	
											Flight Idle	69% NC Idle	15	2	
			Systems Checks (3 per AC) - lower power (includes cross bleed check)	Spots 1-3 (Spot 2)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 4-6 (Spot 5)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 7-9 (Spot 8)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
				Spots 10-12 (Spot 11)*	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											80% N2	80% NC	1	1	left
											Off	*not modeled*	1	1	right
											Off	*not modeled*	1	1	left
											80% N2	80% NC	1	1	right
											Flight Idle	69% NC Idle	30	2	
			Fuel Xfer Check (3 per AC) - medium power	Spots 1-3 (Spot 2)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
				Spots 4-6 (Spot 5)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
				Spots 7-9 (Spot 8)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	
				Spots 10-12 (Spot 11)*	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	10	2	
											75% N2	75% NC	30	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

(a) Naval Depot (NADEP) Page 7 of 8

Aircraft Type (# of Aircraft)	Engine Type (# of eng)	Notes	Test Name	Run-Up Pad ID (Modeled As)	Magnetic Heading (degrees)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	No. of Engines	Comment
F/A-18E (1) F/A-18F (2)	F414-GE-400 (2)	*2,7,9, 10,11*	High Power (3 per AC) - includes Stall Check	Spots 1-3 (Spot 2)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	66% NC Idle	1	1	left
											IRP	**96% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**98% Max A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**98% Max A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**96% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**98% Max A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**98% Max A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	69% NC Idle	5	2	
											Ground Idle	66% NC Idle	5	2	
				Spots 4-6 (Spot 5)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**96% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**98% Max A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**98% Max A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**96% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**98% Max A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**98% Max A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	*69% NC Idle*	5	2	
											Ground Idle	66% NC Idle	5	2	
				Spots 7-9 (Spot 8)	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**96% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**98% Max A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**98% Max A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**96% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**98% Max A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**98% Max A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	69% NC Idle	5	2	
											Ground Idle	66% NC Idle	5	2	
				Spots 10-12 (Spot 11)*	291	25%	9	100%	0%	0%	APU	*not modeled*	1	1	
											Ground Idle	66% NC Idle	1	2	
											Flight Idle	69% NC Idle	1	1	left
											IRP	**96% NC**	1	1	right
											Flight Idle	69% NC Idle	1	1	left
											A/B	**98% Max A/B**	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											Flight Idle	69% NC Idle	0.083	1	left
											A/B	**98% Max A/B**	0.083	1	right
											Flight Idle	69% NC Idle	1	2	
											IRP	**96% NC**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											A/B	**98% Max A/B**	1	1	left
											Flight Idle	69% NC Idle	1	1	right
											Flight Idle	69% NC Idle	0.083	2	
											A/B	**98% Max A/B**	0.083	1	left
											Flight Idle	69% NC Idle	0.083	1	right
											Flight Idle	69% NC Idle	5	2	
											Ground Idle	66% NC Idle	5	2	
			Flight Control Surfaces Sell (1 per AC)	Spots 1-3 (Spot 2)	291	25%	3	100%	0%	0%	Flight Idle	69% NC Idle	15	2	
				Spots 4-6 (Spot 5)	291	25%	3	100%	0%	0%	Flight Idle	69% NC Idle	15	2	
				Spots 7-9 (Spot 8)	291	25%	3	100%	0%	0%	Flight Idle	69% NC Idle	15	2	
				Spots 10-12 (Spot 11)*	291	25%	3	100%	0%	0%	Flight Idle	69% NC Idle	15	2	

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island
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Notes:

1. Currently C-2A aircraft have 4-blade props. Transition to 8-blade props should be completed around Aug 2011.
2. Inbound refers to engine runs done at the testline upon aircraft acceptance for rework, to find problems before disassembly of the aircraft.

   Outbound refers to engine runs done at the testline after the aircraft has been reworked.
3. All E-2C aircraft now have 8 blade props.

   The E-2C engine requires a two minute cool down at Low Speed Ground Idle (LSGI) prior to shutting down the engine(s).

   The E-2C does not have an Auxiliary Power Unit (APU). Main engine start is accomplished by using a huffer.
4. Flt Idle is Flight Idle (100 percent rotor head rpm). Gr Idle is Ground Idle (30-40 percent rotor head rpm).

   The following power setting information is from AESO Memorandum Reports 9822, 9960 and 9905.

   Ground idle (30-40 percent rotor head rpm) is all three main engines @ 269 lbs/hr fuel flow per engine

   Flight Idle (100 percent rotor head rpm) is all three main engine at 20 percent Q engine @ 607 lbs/hr fuel flow per engine

   Taxi is all three main engines at 25 percent Q engine @ 695 lbs/hr fuel flow per engine

   Hover is all three main engines at 68 percent Q @ 1,452 lbs/hr fuel flow per engine

   Climbout is all three main engines at 78 percent Q @ 1,629 lbs/hr fuel flow per engine
5. A 4 Point Plot is a check of engine torque balance and temperatures.
6. Track and Balance is a verification/adjustment of main rotor blade angle of attack, and elimination of main and tail rotor vibration.
7. The F/A-18 Auxiliary Power Unit (APU) is started by depressing a button. It runs for one minute and shuts off.

   IRP is Intermediate Rated Power or Military power setting. It is the maximum power without using Afterburner (A/B).

   The F404-GE-400 and F404-GE-402 engines are turbofan (two shaft) engines. N2 is engine compressor rpm. N1 is engine fan rpm.
8. For F404-GE-400 and F404-GE-402 power settings, fuel flow rates, and %N2 information see respectively AESO memorandum reports 9734 and 2003-1.
9. A Taxi and Nose Wheel Steering (NWS) test is no longer done.
10. It typically takes one or two test flights to log sell an F/A-18 aircraft.
11. For F414-GE-400 power settings, fuel flow rates, and %N2 information see AESO memorandum report 9725.

* Spot 11 is a fabric building and is not used for engine run-ups; Modeled Spot in between Spots 10 and 12.

APU is Auxiliary Power Unit.
LSGI is Low Speed Ground Idle.
HSGI is High Speed Ground Idle.
SHP is Shaft Horse Power.

Table 7 Baseline Annual In-Frame Maintenance Operations at NAS North Island

(b) Other Squadrons

Squadron	Aircraft Type (Modeled As)	Engine Type (# of eng)	Test Name	Run-up Pad ID (Modeled As)	Magnetic Heading (degree)	Pad Utilization (%)	Annual Events	Percent 0700-1900	Percent 1900-2200	Percent 2200-0700	Power Setting	Modeled Power Setting (if different)	Duration (Minutes)	Number of Engines
L3 Flight International	Lear 24/35/36 (C-21A)	TF TFE 731 (2)	Low Power Runs @ Ramp	L3 Ramp	270	100%	52	100%			70-80%N		2	2
			High Power Turns @ MR-1	MR1	270	100%	12	100%			96%N		2	2
Station	C-12/C-26 (C-12)	PT-6A-42 (2)	Low Power Runs @ Transient Line	Trans Line	220	100%	1020	99%	1%		15%Q		5	2
			High Power Runs[1]	High Power	220	100%	48	99%	1%		100%Q		10	2
HS	H-60	T700-GE-700 (2)	Helo Washes[2]	HC Wash	270	100%	2164	80%	17%	3%	Idle		2	2
			Ground Turns[3]	HC Ramp	270	100%	812	80%	17%	3%	60%Q		15	2
			Hover Checks[4]	Pad2	270	100%	812	80%	17%	3%	IGE (20 ft)		10	2
HSL	H-60	T700-GE-700 (2)	Helo Washes[2]	Pad13	270	100%	1165	80%	17%	3%	Idle		2	2
			Ground Turns[3]	HS Ramp	270	100%	437	80%	17%	3%	60%Q		15	2
			Hover Checks[4]	Pad2	270	100%	437	80%	17%	3%	IGE (20 ft)		10	2
Transient	C-40 (C-9A)	CFM56-7 (2)	High Power Turns	MR1	290	100%	50	100%			2 EPR		10	2
							50	100%			1.2 EPR		10	2
			Low Power Turns	MR2	290	100%	100	100%			1.3 EPR		10	1

Notes:

1. Based on 4 runs/month, each lasting an average of 10 minutes.
2. HS squadrons conduct 8 runs/day, 5 days/week, 52weeks/year, which is 2080 ops. HSL tempos are 35/65th of HS tempos.
3. HS squadrons conduct 1-4 runs/day, 5 days/week, 52weeks/year, which is 780 ops. HSL tempos are 35/65th of HS tempos.
4. HS squadrons conduct 3 runs/day, 5 days/week, 52weeks/year, which is 780 ops. HSL tempos are 35/65th of HS tempos.

Q - Torque
N - Compressor Speed
IGE - In Ground Effect
EPR - Engine Pressure Ratio

Source: Wyle, 2006

Table 8 CY2020 Annual Flight Operations at NAS North Island

Squadron/Unit	Aircraft Type (Modeled As)	Note	Departure				Interfacility Departure to OLF Imperial Beach				Other Arrival				Interfacility Arrival from OLF Imperial				Overhead Break Arrival				Touch and Go (2)				GCA Box (2)				TOTAL			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
NADEP/Transient	F-35C		87	5	1	93					50	3	1	54					38	-	-	38	5	-	-	-	10	3	1	14	190	11	3	204
NADEP/Transient	F/A-18E/F		523	27	8	558					302	20	5	327					229	2	1	232	29	-	-	29	62	16	7	85	1,145	65	21	1,231
Transient	E/A-18G		487	9	4	500					465	9	-	474					17	9	-	26	-	-	-	-	-	-	-	-	969	27	4	1,000
NADEP/Transient	F/A-		87	5	1	93					50	3	1	54					38	-	-	38	5	-	-	5	10	3	1	14	190	11	3	204
Transient	AV-8B (F/A-18C/D)		-	-	-	-					-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transient	C-5		94	7	25	126					94	7	26	127					-	-	-	-	-	-	-	-	24	3	-	27	212	17	51	280
Transient	C-17		104	4	20	128					104	4	21	129					-	-	-	-	-	-	-	-	26	3	-	29	234	11	41	286
DHS-CBP	Citation 550	1	138	69	23	230					138	69	23	230					-	-	-	-	-	-	-	-	-	-	-	-	276	138	46	460
L3 Flight International	Lear 24/35/36 (Lear25 & Lear35)		1,878	-	-	1,878					1,878	-	-	1,878					-	-	-	-	548	-	-	548	1,661	-	-	1,661	5,965	-	-	5,965
VR-57	C-40		1,804	46	28	1,878					1,751	72	54	1,877					-	-	-	-	-	-	-	-	332	52	43	427	3,887	170	125	4,182
Transient	C-130H		652	25	-	677					652	25	-	677					-	-	-	-	-	-	-	-	45	15	-	60	1,349	65	-	1,414
VRC-30	C-2	1	507	39	3	549					507	39	3	549					-	-	-	-	-	-	-	-	-	-	-	-	1,014	78	6	1,098
NADEP	E-2	1	94	-	-	94					94	-	-	94					-	-	-	-	-	-	-	-	33	-	-	33	221	-	-	221
Station/DHS-CBP	C-12 (C-12/C-26)	1	148	74	25	247					148	74	25	247					-	-	-	-	-	-	-	-	-	-	-	-	296	148	50	494
Station/DHS-CBP	C-210		-	-	-	-					-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-CBP	AS350	1, 3	288	144	48	480					288	144	48	480								-				-				-	576	288	96	960
DHS-CPB/VP Det	P-8A	5	272	68	200	540					272	68	200	540					-	-	-	-	-	-	-	-	-	-	-	-	544	136	400	1,080
DHS	Dash-8	1, 4	71	142	142	355					71	142	142	355																	142	284	284	710
DHS	H-60	1	99	99	49	247					99	99	49	247																	198	198	98	494
Flying Club	C-172		-	-	-	-					-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-CPB, NADEP, HSC	H-53/H-3 (H-60)		-	-	-	-					-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSC/HSL	H-60	6	16,574	2,191	259	19,024	13,560	1,794	212	15,566	15,954	2,629	442	19,025	13,053	2,152	361	15,566	-	-	-	-	-	-	-	-	9,848	902	111	10,861	68,989	9,668	1,385	80,042
Total			23,907	2,954	836	27,697	13,560	1,794	212	15,566	22,917	3,407	1,040	27,364	13,053	2,152	361	15,566	322	11	1	334	587	-	-	582	12,051	997	163	13,211	86,397	11,315	2,613	100,325

Notes:
1. assumed source document provided sorties vice operations; split sorties evenly between departures and non-break arrivals
2. Each Touch and Go circuit counted as two operations; Each GCA Box circuit counted as two operations
3. AS350 not modeled
4. Dash-8 modeled as E-2;
5. Source: WR 06-11 Addendum #2
6. 30 percent increase relative to Baseline

Table 9 CY2020 Annual Flight Operations at NOLF Imperial Beach

Squadron/Unit	Aircraft Type	Note	Arrival				Interfacility Arrival from NAS North Island				Touch and Go (1)				Departure				Interfacility Departure to NAS North Island				TOTAL			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
HSC/HSL	H-60	2	1,452	4,616	237	6,305	13,560	1,794	212	15,566	195,722	78,289	5,591	279,602	2,016	4,219	70	6,305	13,053	2,152	361	15,566	225,803	91,070	6,471	323,344

Notes:
1. Each Touch and Go circuit counted as two operations
2. 30 percent increase relative to Baseline

Source: Henderson, 2010

Table 10 Modeled Average Daily Flight Events for CY2020 at NAS North Island

(a) All Modeled Types Except H-60

Operation Type	Runway/ Pad	Flight Track	F-35C				F/A-18C/D				F/A-18E/F				E/A-18G				C-5A				C-17			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	0.0048	0.0003	0.0001	0.0052	0.0048	0.0003	0.0001	0.0052	0.0290	0.0015	0.0004	0.0309	0.0267	0.0005	0.0002	0.0274	0.0026	0.0002	0.0007	0.0035	0.0028	0.0001	0.0005	0.0034
	NZY-18	F-18D1	0.2026	0.0116	0.0023	0.2165	0.2026	0.0116	0.0023	0.2165	1.2169	0.0628	0.0186	1.2983	1.1341	0.0210	0.0093	1.1644	0.2523	0.0188	0.0671	0.3382	0.2794	0.0107	0.0537	0.3438
	NZY-29	F-29D1	0.0310	0.0018	0.0004	0.0332	0.0310	0.0018	0.0004	0.0332	0.1869	0.0097	0.0029	0.1995	0.1735	0.0032	0.0014	0.1781	0.0026	0.0002	0.0007	0.0035	0.0028	0.0001	0.0005	0.0034
	NZY-36	F-36D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P3	P3D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P3D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P5	P5D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P5D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arrival	NZY-18	F-18A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0122	0.0009	0.0034	0.0165	0.0135	0.0005	0.0027	0.0167
		F-18A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0005	-	0.0001	0.0006	0.0007	-	0.0001	0.0008
		F-18A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29A1	0.0240	0.0014	0.0005	0.0259	0.0240	0.0014	0.0005	0.0259	0.1446	0.0096	0.0024	0.1566	0.2229	0.0043	-	0.2272	0.0438	0.0033	0.0121	0.0592	0.0499	0.0019	0.0101	0.0619
		F-29A2	0.0240	0.0014	0.0005	0.0259	0.0240	0.0014	0.0005	0.0259	0.1446	0.0096	0.0024	0.1566	0.2229	0.0043	-	0.2272	0.0438	0.0033	0.0121	0.0592	0.0499	0.0019	0.0101	0.0619
		F-29A3	0.0240	0.0014	0.0005	0.0259	0.0240	0.0014	0.0005	0.0259	0.1446	0.0096	0.0024	0.1566	0.2229	0.0043	-	0.2272	0.0438	0.0033	0.0121	0.0592	0.0499	0.0019	0.0101	0.0619
		F-29A4	0.0240	0.0014	0.0005	0.0259	0.0240	0.0014	0.0005	0.0259	0.1446	0.0096	0.0024	0.1566	0.2229	0.0043	-	0.2272	0.0438	0.0033	0.0121	0.0592	0.0499	0.0019	0.0101	0.0619
	NZY-36	F-36A1	0.0411	0.0025	0.0008	0.0444	0.0411	0.0025	0.0008	0.0444	0.2490	0.0165	0.0041	0.2696	0.3822	0.0074	-	0.3896	0.0698	0.0052	0.0193	0.0943	0.0712	0.0027	0.0144	0.0883
	NZY-P10	P10A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P10A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P6	P6A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P6A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Break Arrival	NZY-18	F-18O1	0.0021	-	-	0.0021	0.0021	-	-	0.0021	0.0126	0.0001	0.0001	0.0128	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29O1	0.1020	-	-	0.1020	0.1020	-	-	0.1020	0.6148	0.0054	0.0027	0.6229	0.0466	0.0247	-	0.0713	-	-	-	-	-	-	-	-
Touch and Go	NZY-29	F-29T1	0.0068	-	-	0.0068	0.0068	-	-	0.0068	0.0397	-	-	0.0397	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box	NZY-29	FR-29G1	0.0137	0.0041	0.0014	0.0192	0.0137	0.0041	0.0014	0.0192	0.0849	0.0219	0.0096	0.1164	-	-	-	-	0.0329	0.0041	-	0.0370	0.0356	0.0041	-	0.0397
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Departure			0.2384	0.0137	0.0028	0.2549	0.2384	0.0137	0.0028	0.2549	1.4328	0.0740	0.0219	1.5287	1.3343	0.0247	0.0109	1.3699	0.2575	0.0192	0.0685	0.3452	0.2850	0.0109	0.0547	0.3506
Interfacility Departure																										
Arrival			0.1371	0.0081	0.0028	0.1480	0.1371	0.0081	0.0028	0.1480	0.8274	0.0549	0.0137	0.8960	1.2738	0.0246	-	1.2984	0.2577	0.0193	0.0712	0.3482	0.2850	0.0108	0.0576	0.3534
Break Arrival			0.1041	-	-	0.1041	0.1041	-	-	0.1041	0.6274	0.0055	0.0028	0.6357	0.0466	0.0247	-	0.0713	-	-	-	-	-	-	-	-
Interfacility Arrival																										
Touch and Go			0.0068	-	-	0.0068	0.0068	-	-	0.0068	0.0397	-	-	0.0397	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box			0.0137	0.0041	0.0014	0.0192	0.0137	0.0041	0.0014	0.0192	0.0849	0.0219	0.0096	0.1164	-	-	-	-	0.0329	0.0041	-	0.0370	0.0356	0.0041	-	0.0397
FCF Pattern			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL			0.5001	0.0259	0.0070	0.5330	0.5001	0.0259	0.0070	0.5330	3.0122	0.1563	0.0480	3.2165	2.6547	0.0740	0.0109	2.7396	0.5481	0.0426	0.1397	0.7304	0.6056	0.0258	0.1123	0.7437

Table 10 Modeled Average Daily Flight Events for CY2020 at NAS North Island
(a) All Modeled Types Except H-60 (continued)

Operation Type	Runway/ Pad	Flight Track	Citation 550				Lear 25				Lear 35				C-40				C-130H				C-2			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	0.3592	0.1796	0.0599	0.5987	0.0175	-	-	0.0175	0.0854	-	-	0.0854	0.1482	0.0038	0.0023	0.1543	0.0536	0.0021	-	0.0557	0.0278	0.0021	0.0002	0.0301
	NZY-18	F-18D1	0.0113	0.0057	0.0019	0.0189	0.7436	-	-	0.7436	3.6300	-	-	3.6300	4.6953	0.1197	0.0729	4.8879	1.6970	0.0651	-	1.7621	1.1807	0.0908	0.0070	1.2785
	NZY-29	F-29D1	0.0076	0.0038	0.0013	0.0127	0.1137	-	-	0.1137	0.5552	-	-	0.5552	0.0990	0.0025	0.0015	0.1030	0.0358	0.0014	-	0.0372	0.1806	0.0139	0.0011	0.1956
	NZY-36	F-36D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P3	P3D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P3D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P5	P5D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P5D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arrival	NZY-18	F-18A1	0.0180	0.0090	0.0030	0.0300	-	-	-	-	-	-	-	-	0.2279	0.0094	0.0070	0.2443	0.0848	0.0033	-	0.0881	-	-	-	-
		F-18A2	0.0009	0.0005	0.0002	0.0016	-	-	-	-	-	-	-	-	0.0120	0.0005	0.0004	0.0129	0.0045	0.0002	-	0.0047	-	-	-	-
		F-18A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29A1	0.0662	0.0331	0.0110	0.1103	0.1531	-	-	0.1531	0.7473	-	-	0.7473	0.8395	0.0345	0.0259	0.8999	0.3094	0.0119	-	0.3213	0.2431	0.0187	0.0014	0.2632
		F-29A2	0.0662	0.0331	0.0110	0.1103	0.1531	-	-	0.1531	0.7473	-	-	0.7473	0.8395	0.0345	0.0259	0.8999	0.3094	0.0119	-	0.3213	0.2431	0.0187	0.0014	0.2632
		F-29A3	0.0662	0.0331	0.0110	0.1103	0.1531	-	-	0.1531	0.7473	-	-	0.7473	0.8395	0.0345	0.0259	0.8999	0.3094	0.0119	-	0.3213	0.2431	0.0187	0.0014	0.2632
		F-29A4	0.0662	0.0331	0.0110	0.1103	0.1531	-	-	0.1531	0.7473	-	-	0.7473	0.8395	0.0345	0.0259	0.8999	0.3094	0.0119	-	0.3213	0.2431	0.0187	0.0014	0.2632
	NZY-36	F-36A1	0.0945	0.0473	0.0158	0.1576	0.2624	-	-	0.2624	1.2812	-	-	1.2812	1.1993	0.0493	0.0370	1.2856	0.4595	0.0176	-	0.4771	0.4166	0.0320	0.0025	0.4511
	NZY-P10	P10A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P10A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P6	P6A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P6A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Break Arrival	NZY-18	F-18O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Touch and Go	NZY-29	F-29T1	-	-	-	-	0.1276	-	-	0.1276	0.6231	-	-	0.6231	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box	NZY-29	FR-29G1	-	-	-	-	0.3868	-	-	0.3868	1.8885	-	-	1.8885	0.4548	0.0712	0.0589	0.5849	0.0616	0.0205	-	0.0821	-	-	-	-
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Departure			0.3781	0.1891	0.0631	0.6303	0.8748	-	-	0.8748	4.2706	-	-	4.2706	4.9425	0.1260	0.0767	5.1452	1.7864	0.0686	-	1.8550	1.3891	0.1068	0.0083	1.5042
Interfacility Departure																										
Arrival			0.3782	0.1892	0.0630	0.6304	0.8748	-	-	0.8748	4.2704	-	-	4.2704	4.7972	0.1972	0.1480	5.1424	1.7864	0.0687	-	1.8551	1.3890	0.1068	0.0081	1.5039
Break Arrival			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interfacility Arrival																										
Touch and Go			-	-	-	-	0.1276	-	-	0.1276	0.6231	-	-	0.6231	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box			-	-	-	-	0.3868	-	-	0.3868	1.8885	-	-	1.8885	0.4548	0.0712	0.0589	0.5849	0.0616	0.0205	-	0.0821	-	-	-	-
FCF Pattern			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL			0.7563	0.3783	0.1261	1.2607	2.2640	-	-	2.2640	11.0526	-	-	11.0526	10.1945	0.3944	0.2836	10.8725	3.6344	0.1578	-	3.7922	2.7781	0.2136	0.0164	3.0081

Table 10 Modeled Average Daily Flight Events for CY2020 at NAS North Island
(a) All Modeled Types Except H-60 (concluded)

Operation Type	Runway/ Pad	Flight Track	E-2				Dash-8				C-12 (C-12/C-26)				P-8			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	0.0051	-	-	0.0051	0.0039	0.0078	0.0078	0.0195	0.0122	0.0061	0.0021	0.0204	0.0151	0.0038	0.0111	0.0300
	NZY-18	F-18D1	0.2189	-	-	0.2189	0.1653	0.3306	0.3306	0.8265	0.3852	0.1926	0.0651	0.6429	0.6329	0.1582	0.4654	1.2565
	NZY-29	F-29D1	0.0335	-	-	0.0335	0.0253	0.0506	0.0506	0.1265	0.0081	0.0041	0.0014	0.0136	0.0972	0.0243	0.0715	0.1930
	NZY-36	F-36D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P3	P3D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P3D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P5	P5D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P5D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arrival	NZY-18	F-18A1	-	-	-	-	-	-	-	-	0.0192	0.0096	0.0033	0.0321	-	-	-	-
		F-18A2	-	-	-	-	-	-	-	-	0.0010	0.0005	0.0002	0.0017	-	-	-	-
		F-18A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29A1	0.0451	-	-	0.0451	0.0340	0.0681	0.0681	0.1702	0.0702	0.0351	0.0119	0.1172	0.1302	0.0326	0.0958	0.2586
		F-29A2	0.0451	-	-	0.0451	0.0340	0.0681	0.0681	0.1702	0.0702	0.0351	0.0119	0.1172	0.1302	0.0326	0.0958	0.2586
		F-29A3	0.0451	-	-	0.0451	0.0340	0.0681	0.0681	0.1702	0.0702	0.0351	0.0119	0.1172	0.1302	0.0326	0.0958	0.2586
		F-29A4	0.0451	-	-	0.0451	0.0340	0.0681	0.0681	0.1702	0.0702	0.0351	0.0119	0.1172	0.1302	0.0326	0.0958	0.2586
	NZY-36	F-36A1	0.0773	-	-	0.0773	0.0584	0.1168	0.1168	0.2920	0.1043	0.0522	0.0176	0.1741	0.2243	0.0561	0.1649	0.4453
	NZY-P10	P10A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P10A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-P6	P6A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		P6A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Break Arrival	NZY-18	F-18O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NZY-29	F-29O1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Touch and Go	NZY-29	F-29T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box	NZY-29	FR-29G1	0.0452	-	-	0.0452	-	-	-	-	-	-	-	-	-	-	-	-
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Departure			0.2575	-	-	0.2575	0.1945	0.3890	0.3890	0.9725	0.4055	0.2028	0.0686	0.6769	0.7452	0.1863	0.5480	1.4795
Interfacility Departure																		
Arrival			0.2577	-	-	0.2577	0.1944	0.3892	0.3892	0.9728	0.4053	0.2027	0.0687	0.6767	0.7451	0.1865	0.5481	1.4797
Break Arrival			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interfacility Arrival																		
Touch and Go			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GCA Box			0.0452	-	-	0.0452	-	-	-	-	-	-	-	-	-	-	-	-
FCF Pattern			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL			0.5604	-	-	0.5604	0.3889	0.7782	0.7782	1.9453	0.8108	0.4055	0.1373	1.3536	1.4903	0.3728	1.0961	2.9592

Table 10 Modeled Average Daily Flight Events for CY2020 at NAS North Island
(b) H-60 and Grand Total Only

Operation Type	Runway/ Pad	Flight Track	H-60*				Grand Total (All Types)			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Departure	NZY-11	F-11D1	-	-	-	-	0.7987	0.2082	0.0854	1.0923
	NZY-18	F-18D1	-	-	-	-	16.6481	1.0992	1.0962	18.8435
	NZY-29	F-29D1	-	-	-	-	1.5838	0.1174	0.1337	1.8349
	NZY-36	F-36D1	-	-	-	-	-	-	-	-
	NZY-P3	P3D1	14.8458	2.0390	0.2742	17.1590	14.8458	2.0390	0.2742	17.1590
		P3D4	14.8458	2.0390	0.2742	17.1590	14.8458	2.0390	0.2742	17.1590
	NZY-P5	P5D1	7.9940	1.0980	0.1477	9.2397	7.9940	1.0980	0.1477	9.2397
		P5D4	7.9940	1.0980	0.1477	9.2397	7.9940	1.0980	0.1477	9.2397
Interfacility Departure	NZY-P3	P3D2-27	9.6828	1.2810	0.1514	11.1152	9.6828	1.2810	0.1514	11.1152
		P3D2-P1	1.6945	0.2242	0.0265	1.9452	1.6945	0.2242	0.0265	1.9452
		P3D2-P2	3.6310	0.4804	0.0568	4.1682	3.6310	0.4804	0.0568	4.1682
		P3D2-P3	1.4524	0.1922	0.0227	1.6673	1.4524	0.1922	0.0227	1.6673
		P3D2-P4	3.6310	0.4804	0.0568	4.1682	3.6310	0.4804	0.0568	4.1682
		P3D2-P5	1.4524	0.1922	0.0227	1.6673	1.4524	0.1922	0.0227	1.6673
		P3D3-27	0.9683	0.1281	0.0151	1.1115	0.9683	0.1281	0.0151	1.1115
		P3D3-P1	0.2421	0.0320	0.0038	0.2779	0.2421	0.0320	0.0038	0.2779
		P3D3-P2	0.4841	0.0641	0.0076	0.5558	0.4841	0.0641	0.0076	0.5558
		P3D3-P3	0.2421	0.0320	0.0038	0.2779	0.2421	0.0320	0.0038	0.2779
		P3D3-P4	0.4841	0.0641	0.0076	0.5558	0.4841	0.0641	0.0076	0.5558
		P3D3-P5	0.2421	0.0320	0.0038	0.2779	0.2421	0.0320	0.0038	0.2779
	NZY-P5	P5D2-27	5.1775	0.6850	0.0809	5.9434	5.1775	0.6850	0.0809	5.9434
		P5D2-P1	0.9061	0.1199	0.0142	1.0402	0.9061	0.1199	0.0142	1.0402
		P5D2-P2	1.9416	0.2569	0.0304	2.2289	1.9416	0.2569	0.0304	2.2289
		P5D2-P3	0.7766	0.1027	0.0121	0.8914	0.7766	0.1027	0.0121	0.8914
		P5D2-P4	1.9416	0.2569	0.0304	2.2289	1.9416	0.2569	0.0304	2.2289
		P5D2-P5	0.7766	0.1027	0.0121	0.8914	0.7766	0.1027	0.0121	0.8914
		P5D3-27	0.5177	0.0685	0.0081	0.5943	0.5177	0.0685	0.0081	0.5943
		P5D3-P1	0.1294	0.0171	0.0020	0.1485	0.1294	0.0171	0.0020	0.1485
		P5D3-P2	0.2589	0.0342	0.0040	0.2971	0.2589	0.0342	0.0040	0.2971
		P5D3-P3	0.1294	0.0171	0.0020	0.1485	0.1294	0.0171	0.0020	0.1485
		P5D3-P4	0.3883	0.0514	0.0061	0.4458	0.3883	0.0514	0.0061	0.4458
Arrival	NZY-18	F-18A1	-	-	-	-	0.3756	0.0327	0.0194	0.4277
		F-18A2	-	-	-	-	0.0196	0.0017	0.0010	0.0223
		F-18A3	-	-	-	-	-	-	-	-
	NZY-29	F-29A1	-	-	-	-	3.1473	0.2559	0.2397	3.6429
		F-29A2	-	-	-	-	3.1473	0.2559	0.2397	3.6429
		F-29A3	-	-	-	-	3.1473	0.2559	0.2397	3.6429
		F-29A4	-	-	-	-	3.1473	0.2559	0.2397	3.6429
	NZY-36	F-36A1	-	-	-	-	5.0322	0.4081	0.3940	5.8343
	NZY-P10	P10A1	14.2938	2.4290	0.4372	17.1600	14.2938	2.4290	0.4372	17.1600
		P10A4	14.2938	2.4290	0.4372	17.1600	14.2938	2.4290	0.4372	17.1600
	NZY-P6	P6A1	7.6966	1.3079	0.2354	9.2399	7.6966	1.3079	0.2354	9.2399
		P6A4	7.6966	1.3079	0.2354	9.2399	7.6966	1.3079	0.2354	9.2399
Break Arrival	NZY-18	F-18O1	-	-	-	-	0.0168	0.0001	0.0001	0.0170
	NZY-29	F-29O1	-	-	-	-	0.8654	0.0301	0.0027	0.8982

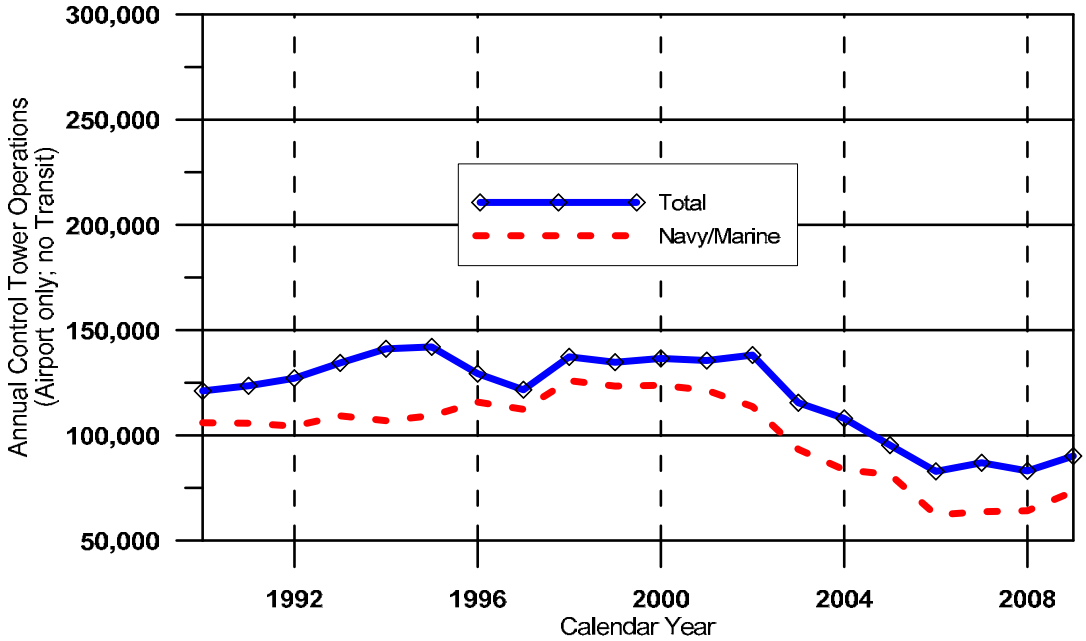
Table 10 Modeled Average Daily Flight Events for CY2020 at NAS North Island
(b) H-60 and Grand Total Only (concluded)

Operation Type	Runway/ Pad	Flight Track	H-60*				Grand Total (All Types)			
			0700-1900	1900-2200	2200-0700	Total	0700-1900	1900-2200	2200-0700	Total
Interfacility Arrival	NZY-P10	27D2-P10	8.1823	1.3490	0.2263	9.7576	8.1823	1.3490	0.2263	9.7576
		27D3-P10	2.0455	0.3372	0.0566	2.4393	2.0455	0.3372	0.0566	2.4393
		P1D2-P10	1.4876	0.2453	0.0411	1.7740	1.4876	0.2453	0.0411	1.7740
		P1D3-P10	0.3719	0.0613	0.0103	0.4435	0.3719	0.0613	0.0103	0.4435
		P2D2-P10	3.1614	0.5212	0.0874	3.7700	3.1614	0.5212	0.0874	3.7700
		P2D3-P10	0.7904	0.1303	0.0219	0.9426	0.7904	0.1303	0.0219	0.9426
		P3D2-P10	1.3017	0.2146	0.0360	1.5523	1.3017	0.2146	0.0360	1.5523
		P3D3-P10	0.3254	0.0536	0.0090	0.3880	0.3254	0.0536	0.0090	0.3880
		P4D2-P10	3.1614	0.5212	0.0874	3.7700	3.1614	0.5212	0.0874	3.7700
		P4D3-P10	0.7904	0.1303	0.0219	0.9426	0.7904	0.1303	0.0219	0.9426
		P5D2-P10	1.3017	0.2146	0.0360	1.5523	1.3017	0.2146	0.0360	1.5523
		P5D3-P10	0.3254	0.0536	0.0090	0.3880	0.3254	0.0536	0.0090	0.3880
	NZY-P6	27D2-P6	3.5797	0.5902	0.0990	4.2689	3.5797	0.5902	0.0990	4.2689
		27D3-P6	1.1015	0.1816	0.0305	1.3136	1.1015	0.1816	0.0305	1.3136
		27D5-P6	0.8261	0.1362	0.0228	0.9851	0.8261	0.1362	0.0228	0.9851
		P1D2-P6	0.6509	0.1073	0.0180	0.7762	0.6509	0.1073	0.0180	0.7762
		P1D3-P6	0.2003	0.0330	0.0055	0.2388	0.2003	0.0330	0.0055	0.2388
		P1D5-P6	0.1503	0.0248	0.0042	0.1793	0.1503	0.0248	0.0042	0.1793
		P2D2-P6	1.3831	0.2280	0.0383	1.6494	1.3831	0.2280	0.0383	1.6494
		P2D3-P6	0.4256	0.0702	0.0118	0.5076	0.4256	0.0702	0.0118	0.5076
		P2D5-P6	0.3191	0.0526	0.0088	0.3805	0.3191	0.0526	0.0088	0.3805
		P3D2-P6	0.5695	0.0939	0.0158	0.6792	0.5695	0.0939	0.0158	0.6792
		P3D3-P6	0.1752	0.0289	0.0048	0.2089	0.1752	0.0289	0.0048	0.2089
		P3D5-P6	0.1314	0.0217	0.0036	0.1567	0.1314	0.0217	0.0036	0.1567
		P4D2-P6	1.3831	0.2280	0.0383	1.6494	1.3831	0.2280	0.0383	1.6494
		P4D3-P6	0.4256	0.0702	0.0118	0.5076	0.4256	0.0702	0.0118	0.5076
		P4D5-P6	0.3191	0.0526	0.0088	0.3805	0.3191	0.0526	0.0088	0.3805
		P5D2-P6	0.5695	0.0939	0.0158	0.6792	0.5695	0.0939	0.0158	0.6792
		P5D3-P6	0.1752	0.0289	0.0048	0.2089	0.1752	0.0289	0.0048	0.2089
		P5D5-P6	0.1314	0.0217	0.0036	0.1567	0.1314	0.0217	0.0036	0.1567
Touch and Go	NZY-29	F-29T1	-	-	-	-	0.8040	-	-	0.8040
GCA Box	NZY-29	FR-29G1	13.4904	1.2356	0.1521	14.8781	16.5081	1.3656	0.2234	18.0971
FCF Pattern	NZY-18	18T1	-	-	-	-	-	-	-	-
Departure			45.6796	6.2740	0.8438	52.7974	64.7102	7.6988	2.1591	74.5681
Interfacility Departure			37.1506	4.9151	0.5809	42.6466	37.1506	4.9151	0.5809	42.6466
Arrival			43.9808	7.4738	1.3452	52.7998	61.9974	8.9399	2.7184	73.6557
Break Arrival			-	-	-	-	0.8822	0.0302	0.0028	0.9152
Interfacility Arrival			35.7617	5.8959	0.9891	42.6467	35.7617	5.8959	0.9891	42.6467
Touch and Go			-	-	-	-	0.8040	-	-	0.8040
GCA Box			13.4904	1.2356	0.1521	14.8781	16.5081	1.3656	0.2234	18.0971
FCF Pattern			-	-	-	-	-	-	-	-
GRAND TOTAL			176.0631	25.7944	3.9111	205.7686	217.8142	28.8455	6.6737	253.3334

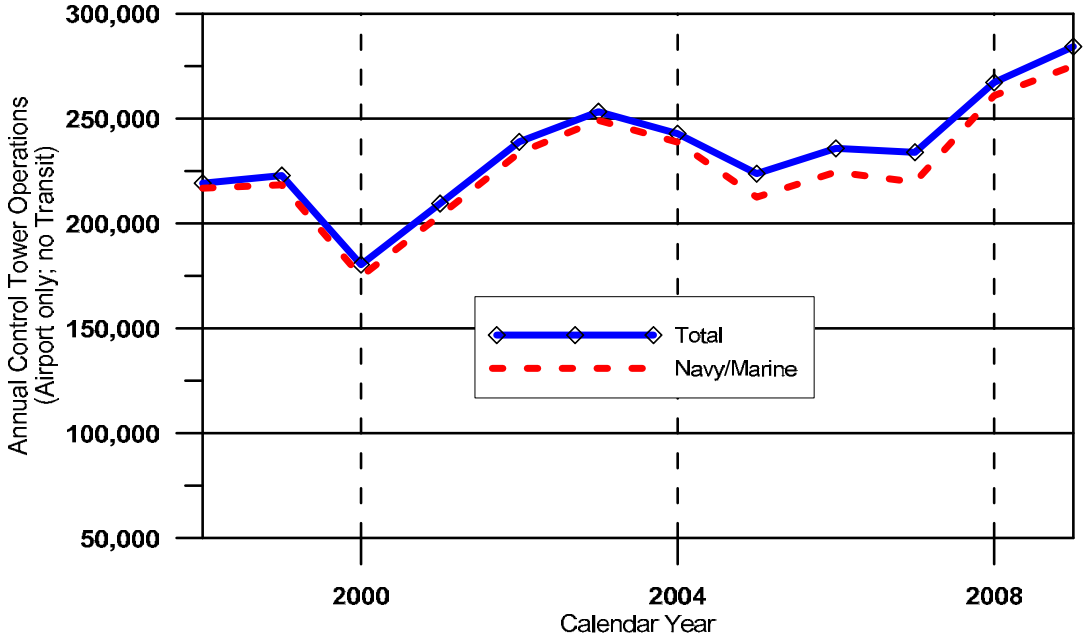
Note:
*Includes DHS H-60

Table 11 Modeled Average Daily Flight Events for CY2020 for NOLF Imperial Beach

Operation Type	Runway/ Pad	Flight Track	H-60			
			0700-1900	1900-2200	2200-0700	Total
Departure	NRS-27	IB-27D1	5.5241	11.5575	0.1923	17.2739
Interfacility Departure	NRS-27	27D2-P6	3.5798	0.5900	0.0991	4.2689
		27D3-P6	1.3831	0.2280	0.0383	1.6494
		27D5-P6	1.3831	0.2280	0.0383	1.6494
		27D2-P10	8.1825	1.3487	0.2265	9.7577
		27D3-P10	1.3018	0.2146	0.0360	1.5524
	NRS-P1	P1D2-P6	1.1016	0.1816	0.0305	1.3137
		P1D3-P6	0.4256	0.0701	0.0118	0.5075
		P1D5-P6	0.4256	0.0701	0.0118	0.5075
		P1D2-P10	2.0456	0.3372	0.0566	2.4394
		P1D3-P10	0.3254	0.0536	0.0090	0.3880
	NRS-P2	P2D2-P6	0.8261	0.1362	0.0229	0.9852
		P2D3-P6	0.3191	0.0526	0.0088	0.3805
		P2D5-P6	0.3191	0.0526	0.0088	0.3805
		P2D2-P10	1.4877	0.2452	0.0412	1.7741
		P2D3-P10	3.1614	0.5211	0.0875	3.7700
	NRS-P3	P3D2-P6	0.6509	0.1073	0.0180	0.7762
		P3D3-P6	0.5695	0.0939	0.0158	0.6792
		P3D5-P6	0.5695	0.0939	0.0158	0.6792
		P3D2-P10	0.3719	0.0613	0.0103	0.4435
		P3D3-P10	0.7905	0.1303	0.0219	0.9427
	NRS-P4	P4D2-P6	0.2003	0.0330	0.0055	0.2388
		P4D3-P6	0.1752	0.0289	0.0049	0.2090
		P4D5-P6	0.1752	0.0289	0.0049	0.2090
		P4D2-P10	3.1614	0.5211	0.0875	3.7700
		P4D3-P10	1.3018	0.2146	0.0360	1.5524
	NRS-P5	P5D2-P6	0.1503	0.0248	0.0042	0.1793
		P5D3-P6	0.1314	0.0217	0.0036	0.1567
		P5D5-P6	0.1314	0.0217	0.0036	0.1567
		P5D2-P10	0.7905	0.1303	0.0219	0.9427
		P5D3-P10	0.3254	0.0536	0.0090	0.3880
Arrival	NRS-27	IB-27A1	0.5968	1.8971	0.0972	2.5911
		IB-27A2	0.5968	1.8971	0.0972	2.5911
		IB-27A3	2.7848	8.8532	0.4538	12.0918
Interfacility Arrival	NRS-27	P5D2-27	5.1776	0.6850	0.0809	5.9435
		P5D3-27	0.5178	0.0685	0.0081	0.5944
		P3D2-27	9.6830	1.2810	0.1513	11.1153
		P3D3-27	0.9683	0.1281	0.0151	1.1115
	NRS-P1	P5D2-P1	0.9061	0.1199	0.0142	1.0402
		P5D3-P1	0.1294	0.0171	0.0020	0.1485
		P3D2-P1	1.6945	0.2242	0.0265	1.9452
		P3D3-P1	0.2421	0.0320	0.0038	0.2779
	NRS-P2	P5D2-P2	1.9416	0.2569	0.0303	2.2288
		P5D3-P2	0.2589	0.0342	0.0040	0.2971
		P3D2-P2	3.6311	0.4804	0.0567	4.1682
		P3D3-P2	0.4841	0.0641	0.0076	0.5558
	NRS-P3	P5D2-P3	0.7766	0.1027	0.0121	0.8914
		P5D3-P3	0.1294	0.0171	0.0020	0.1485
		P3D2-P3	1.4524	0.1922	0.0227	1.6673
		P3D3-P3	0.2421	0.0320	0.0038	0.2779
	NRS-P4	P5D2-P4	1.9416	0.2569	0.0303	2.2288
		P5D3-P4	0.3883	0.0514	0.0061	0.4458
		P3D2-P4	3.6311	0.4804	0.0567	4.1682
		P3D3-P4	0.4841	0.0641	0.0076	0.5558
	NRS-P5	P5D2-P5	0.7766	0.1027	0.0121	0.8914
		P3D2-P5	1.4524	0.1922	0.0227	1.6673
		P3D3-P5	0.2421	0.0320	0.0038	0.2779
Touch and Go	NRS-27	IB-27T1	117.9691	47.1876	3.3701	168.5268
	NRS-P1	IB-P1T1	21.4489	8.5796	0.6127	30.6412
	NRS-P2	IB-P2T1	45.5790	18.2316	1.3021	65.1127
	NRS-P3	IB-P3T1	18.7678	7.5071	0.5362	26.8111
	NRS-P4	IB-P4T1	45.5790	18.2316	1.3021	65.1127
	NRS-P5	IB-P5T1	18.7678	7.5071	0.5362	26.8111
Departure			5.5241	11.5575	0.1923	17.2739
Interfacility Departure			35.7627	5.8949	0.9900	42.6476
Arrival			3.9784	12.6474	0.6482	17.2740
Interfacility Arrival			37.1512	4.9151	0.5804	42.6467
Touch and Go			268.1116	107.2446	7.6594	383.0156
GRAND TOTAL			350.5280	142.2595	10.0703	502.8578



(a) NAS North Island



(b) NOLF Imperial Beach

Figure 1 Annual Flight Operations from Air Traffic Activity Reports

Figure 2 Modeled Maintenance Run-up Locations

Figure 3 Departure Flight Tracks at NAS North Island

Figure 4 Arrival Flight Tracks at NAS North Island

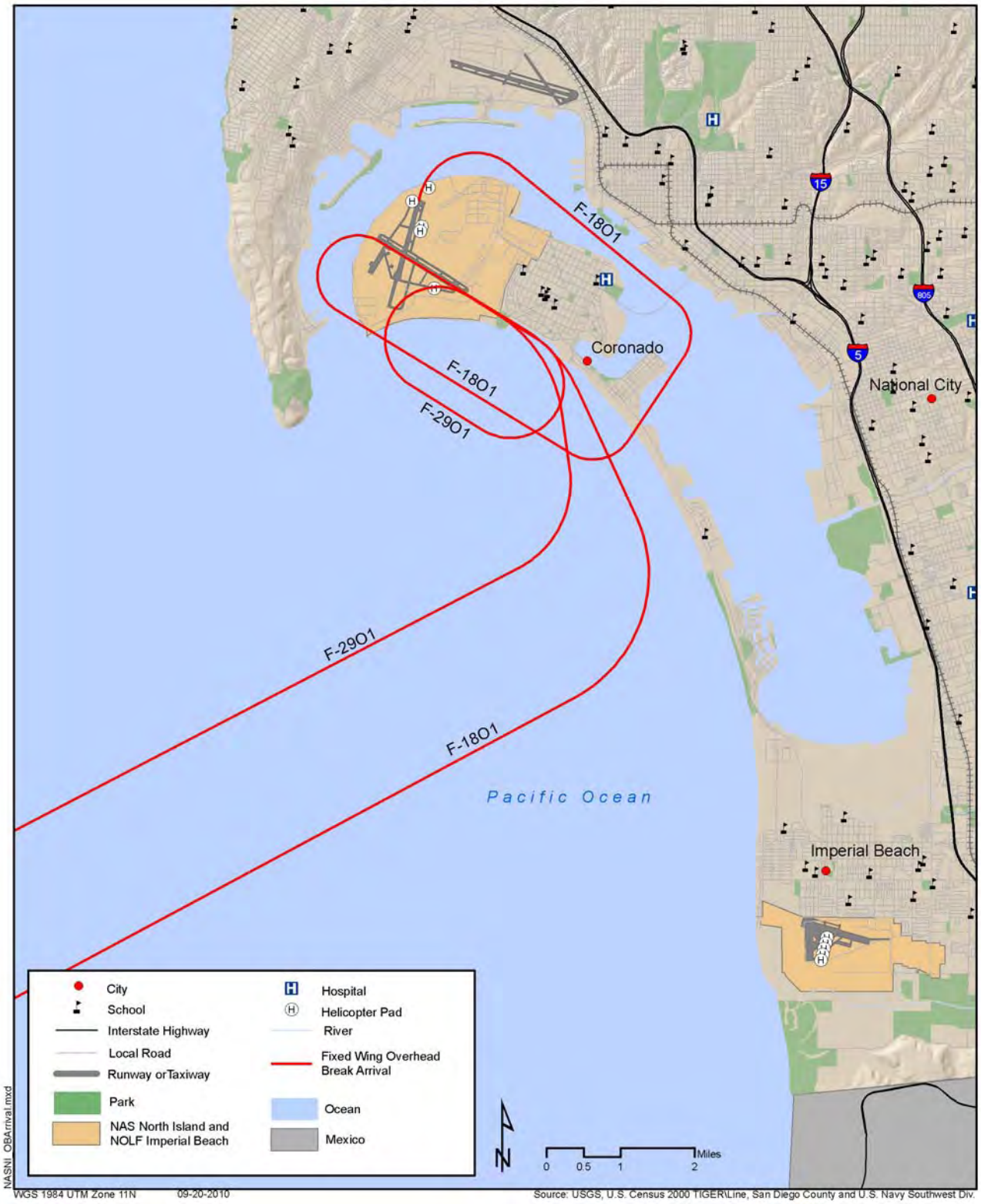


Figure 5 Overhead Break Arrival Flight Tracks at NAS North Island

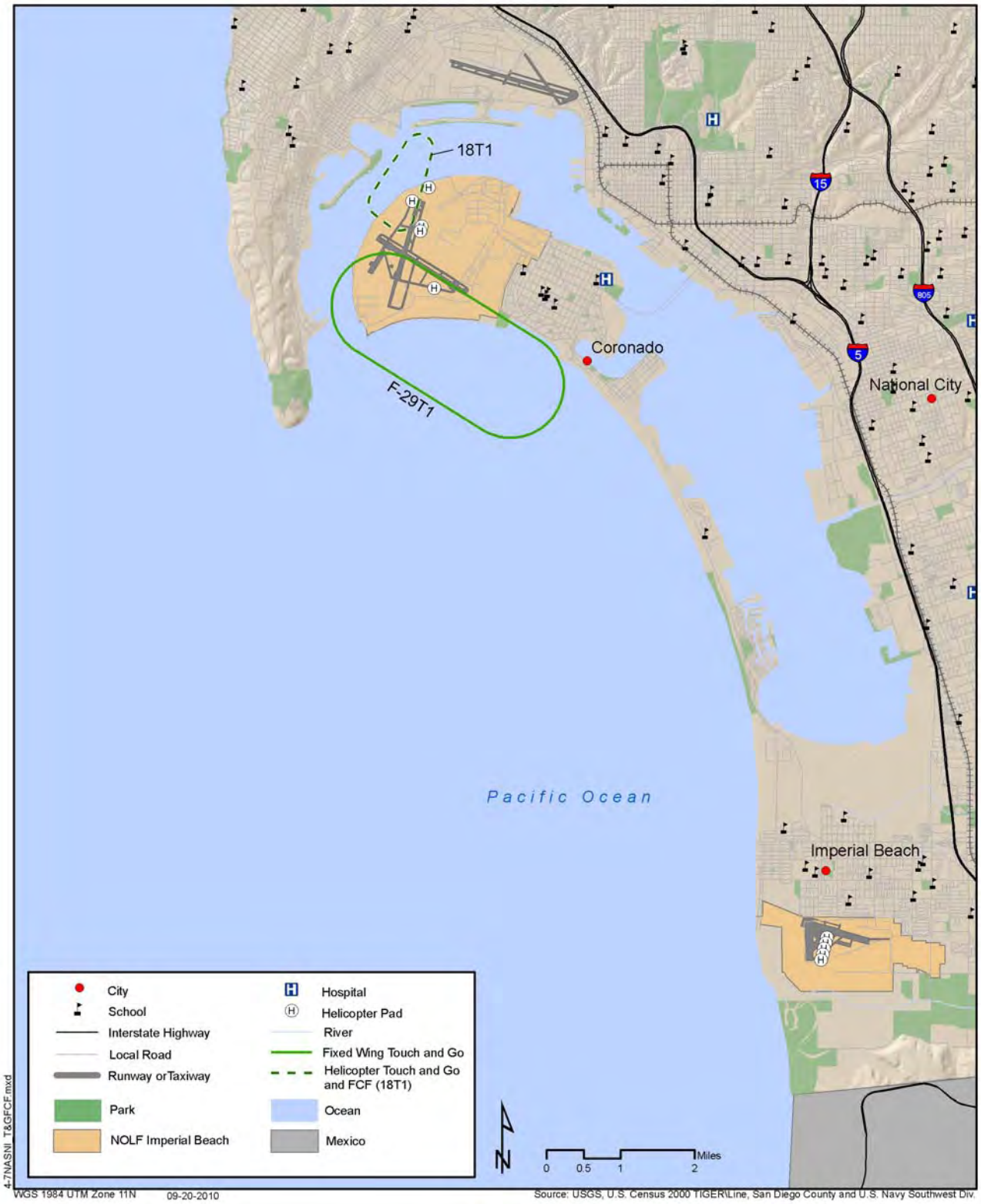


Figure 6 Touch and Go and FCF Flight Tracks at NAS North Island

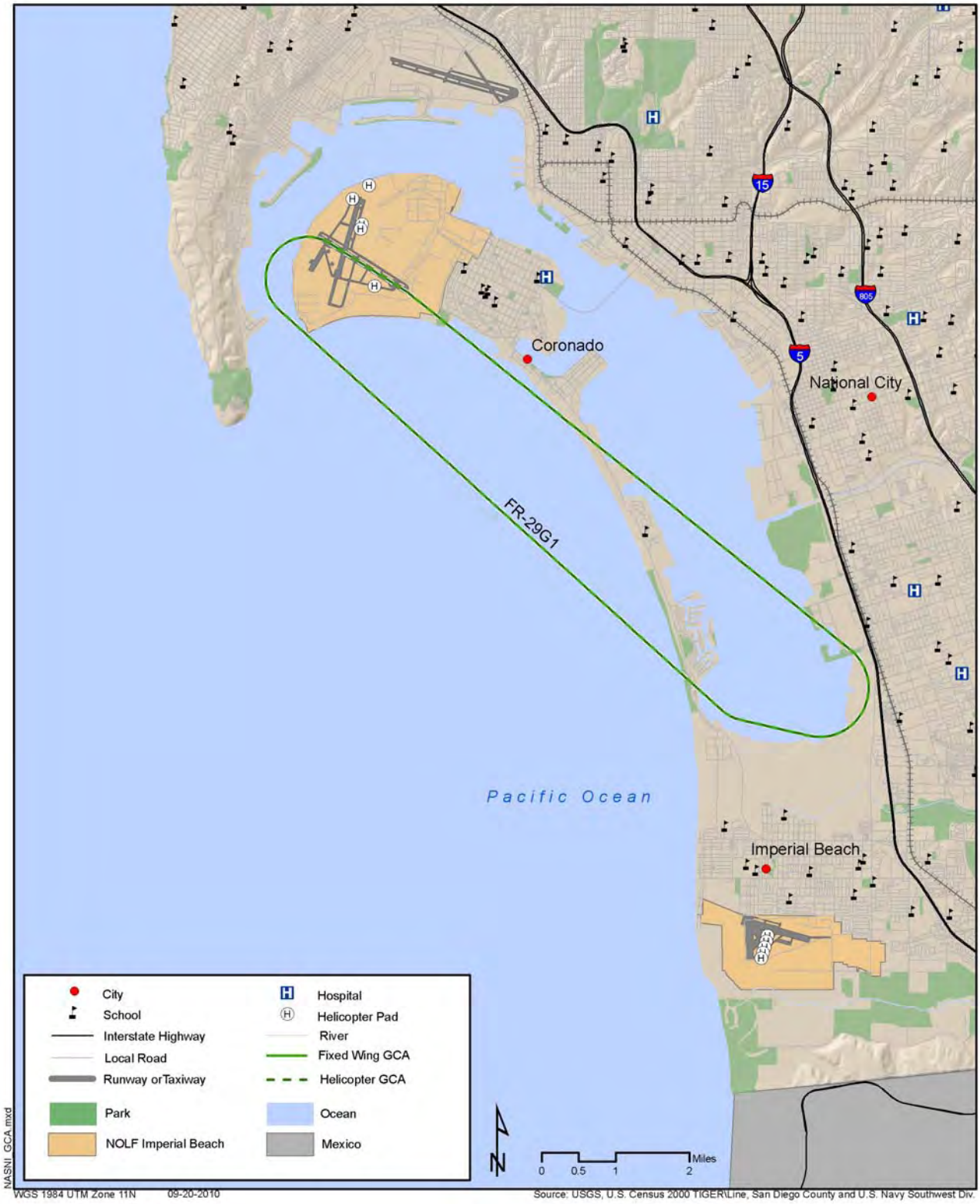


Figure 7 GCA Flight Track at NAS North Island

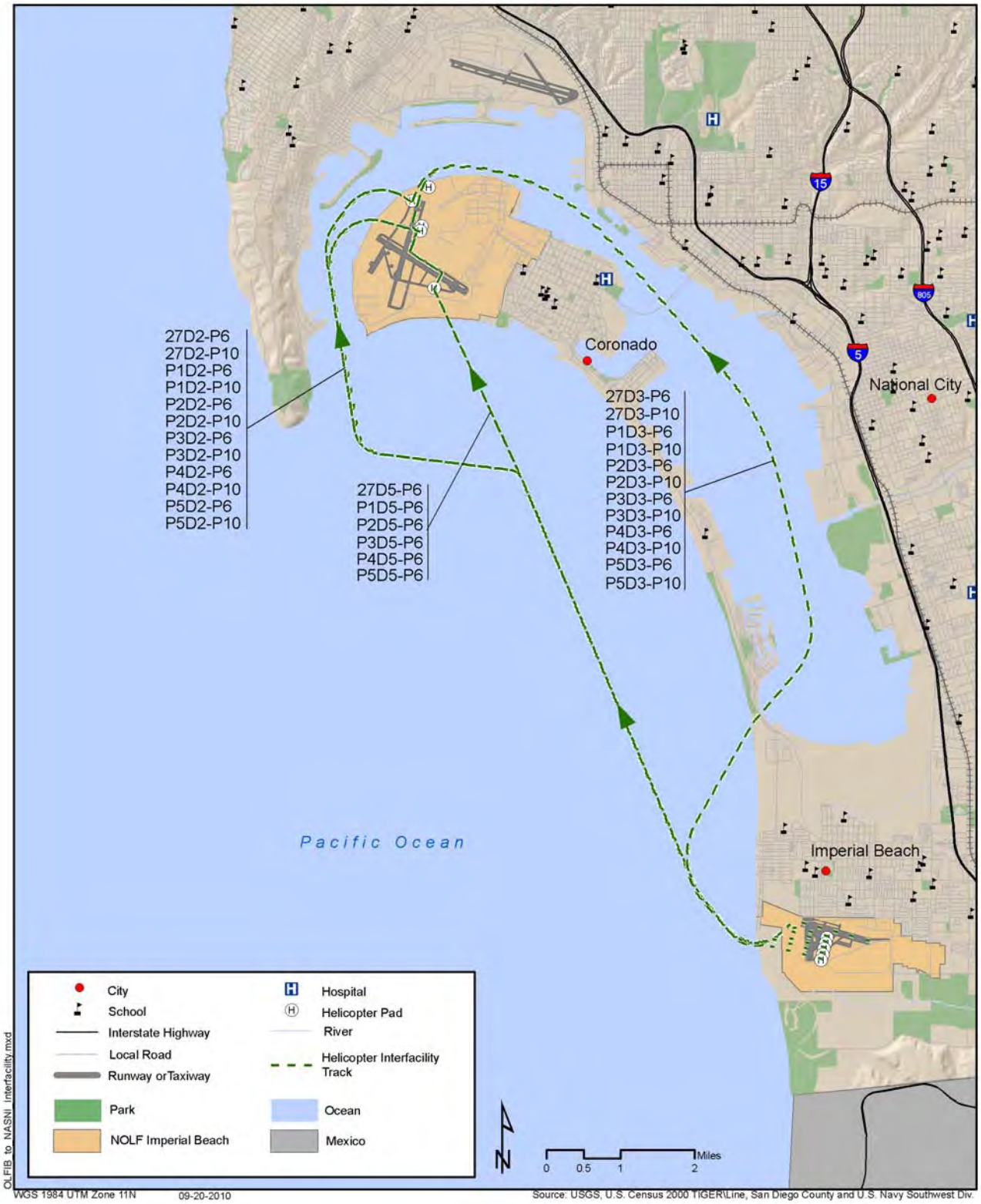


Figure 8 Helicopter Interfacility Flight Tracks from NAS North Island to NOLF Imperial Beach

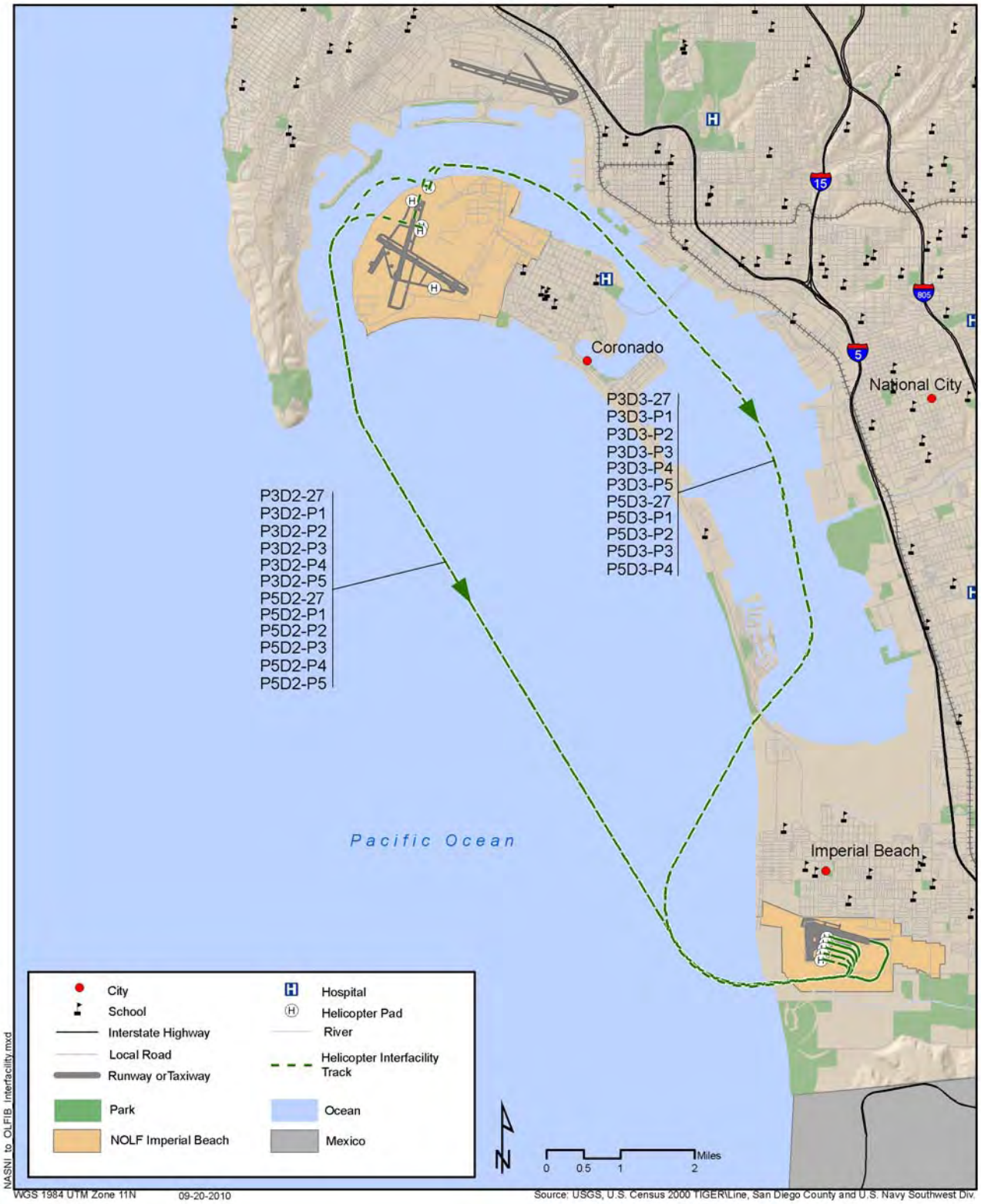


Figure 9 Helicopter Interfacility Flight Tracks from NOLF Imperial Beach to NAS North Island

Figure 10 Helicopter Flight Tracks at NOLF Imperial Beach

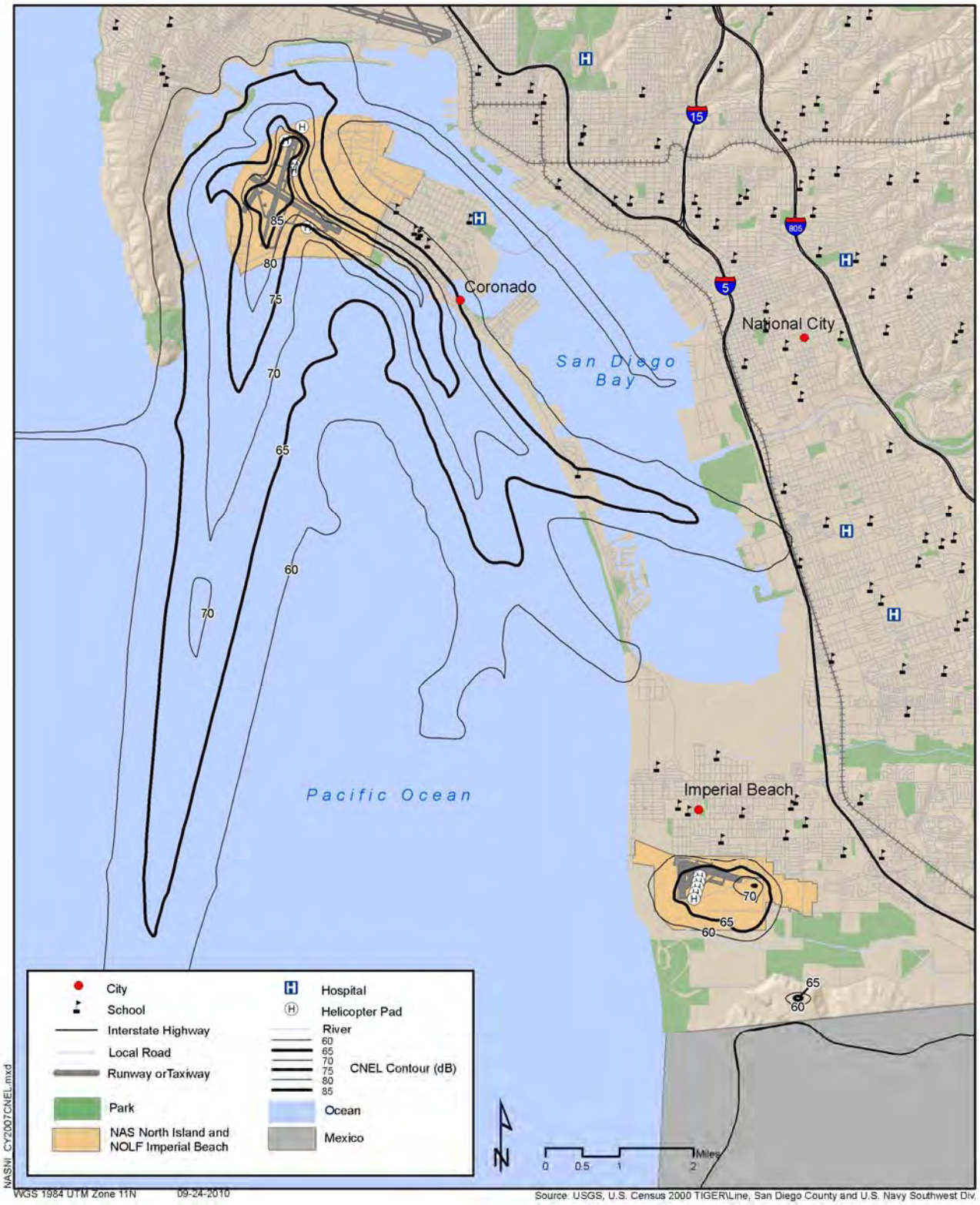


Figure 11 CNEL Contours for Baseline AAD Aircraft Operations at NAS North Island

Figure 12 CNEL Contours for Baseline AAD Aircraft Operations at NOLF Imperial Beach

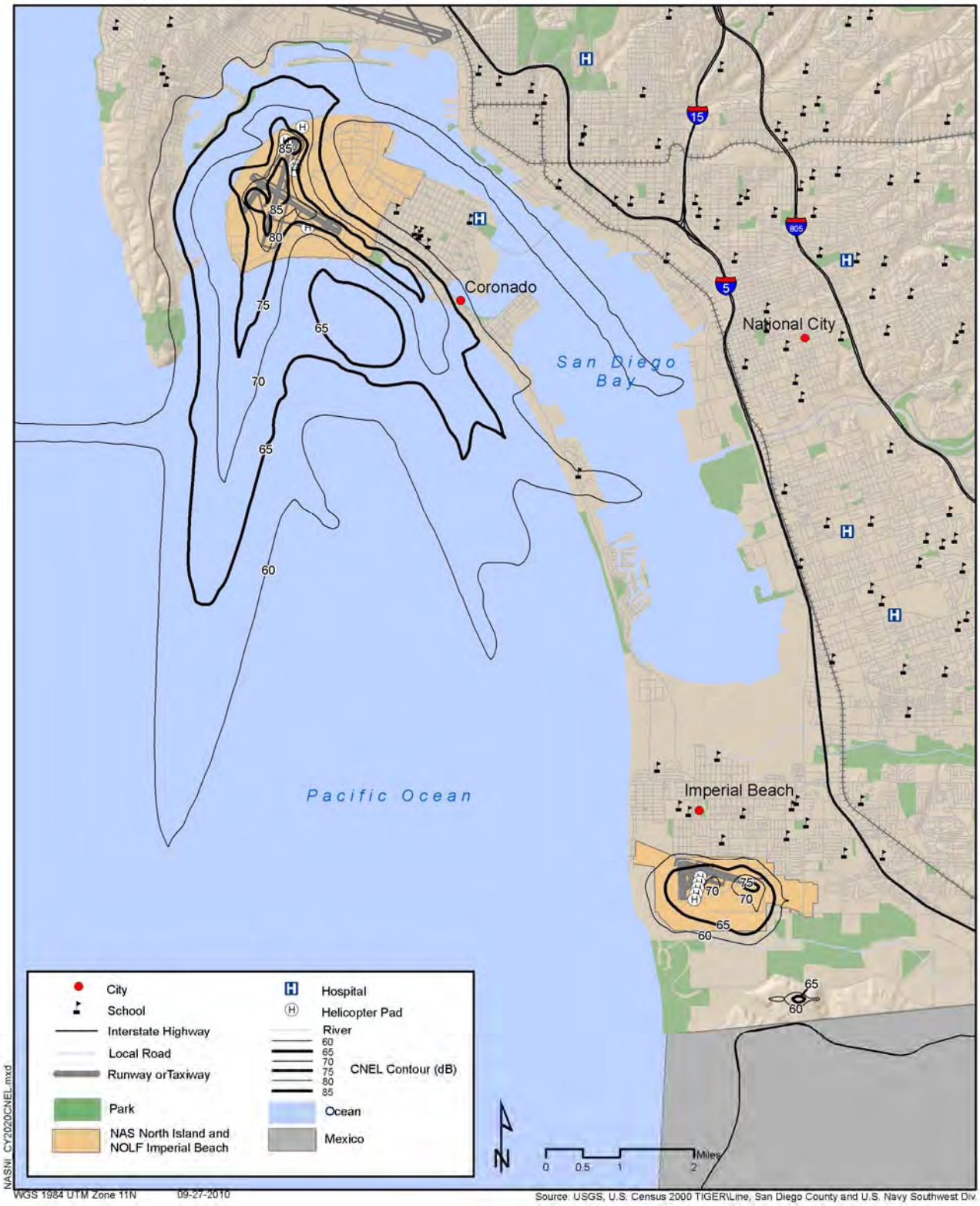


Figure 13 CNEL Contours for CY2020 Prospective AAD Aircraft Operations at NAS North Island

Figure 14 CNEL Contours for CY2020 Prospective AAD Aircraft Operations at NOLF Imperial Beach