

Noise Model Calculation Data

Napa County Airport

AIRCRAFT MIX (Estimated 2001 Activity Level)			
<i>Aircraft Type</i>	<i>Total Operations</i>		
	<i>Annual</i>	<i>Average Day</i>	<i>Percentage</i>
Single-Engine, Propeller, Fixed Pitch	54,000	147.95	42.83%
Single-Engine, Propeller, Variable Pitch	32,040	87.78	25.41%
Twin-Engine, Propeller, Piston	15,640	42.85	12.40%
Twin-Engine, Turboprop	13,140	36.00	10.42%
Small Business Jet (e.g., Citation)	5,630	15.42	4.47%
Medium Business Jet (e.g., Falcon 900)	1,250	3.42	1.00%
Large Business Jet (e.g., Gulfstream)	1,880	5.15	1.49%
Helicopter	2,500	6.85	1.98%
Total	126,080	345.42	100.00%

AIRCRAFT MIX (Forecast 2021 Activity Level)			
<i>Aircraft Type</i>	<i>Total Operations</i>		
	<i>Annual</i>	<i>Average Day</i>	<i>Percentage</i>
Single-Engine, Propeller, Fixed Pitch	97,000	265.75	37.31%
Single-Engine, Propeller, Variable Pitch	78,000	213.7	30.00%
Twin-Engine, Propeller, Piston	33,500	91.78	12.88%
Twin-Engine, Turboprop	27,000	73.97	10.38%
Small Business Jet (e.g., Citation)	12,500	34.25	4.81%
Medium Business Jet (e.g., Falcon 900)	4,500	12.33	1.73%
Large Business Jet (e.g., Gulfstream)	3,500	9.59	1.35%
Helicopter	4,000	10.96	1.54%
Total	260,000	712.33	100.00%

TIME OF DAY (Estimated 2001 and 2021)				
<i>Aircraft Type</i>		<i>Percentage of Operations by Aircraft Type</i>		
		<i>Day 7:00 a.m. 7:00 p.m.</i>	<i>Evening 7:00 p.m. 10:00 p.m.</i>	<i>Night 10:00 p.m. 7:00 a.m.</i>
Single-Engine, Propeller, Fixed Pitch	Takeoff	95.0%	4.0%	1.0%
	Landing	95.0%	4.0%	1.0%
Single-Engine, Propeller, Variable Pitch	Takeoff	95.0%	4.0%	1.0%
	Landing	95.0%	4.0%	1.0%
Twin-Engine, Propeller, Piston	Takeoff	97.0%	2.0%	1.0%
	Landing	97.0%	2.0%	1.0%
Twin-Engine, Turboprop	Takeoff	97.0%	2.0%	1.0%
	Landing	97.0%	2.0%	1.0%
All Business Jets	Takeoff	99.0%	1.0%	—
	Landing	99.0%	1.0%	—
Helicopter	Takeoff	75.0%	16.0%	9.0%
	Landing	75.0%	16.0%	9.0%

RUNWAY UTILIZATION (Estimated 2001 and 2021)								
<i>Aircraft Type</i>		<i>Percentage of Takeoffs and Landings</i>						
		<i>Runway 18R</i>	<i>Runway 36L</i>	<i>Runway 18L</i>	<i>Runway 36R</i>	<i>Runway 6</i>	<i>Runway 24</i>	<i>Helipad</i>
Single-Engine, Propeller, Fixed and Variable Pitch	Day	60.0	2.5	20.0	0.5	2.0	15.0	—
	Evening	60.0	2.5	20.0	0.5	2.0	15.0	—
	Night	60.0	2.5	20.0	0.5	2.0	15.0	—
Twin-Engine, Propeller, Piston	Day	60.0	2.5	20.0	0.5	20.0	15.0	—
	Evening	60.0	2.5	20.0	0.5	20.0	15.0	—
	Night	60.0	2.5	20.0	0.5	20.0	15.0	—
Twin-Engine, Turboprop	Day	75.0	5.0	—	—	5.0	15.0	—
	Evening	75.0	5.0	—	—	5.0	15.0	—
	Night	75.0	5.0	—	—	5.0	15.0	—
All Business Jets	Day	75.0	5.0	—	—	5.0	15.0	—
	Evening	75.0	5.0	—	—	5.0	15.0	—
	Night	75.0	5.0	—	—	5.0	15.0	—
Helicopter	Day	—	—	—	—	—	—	100.0
	Evening	—	—	—	—	—	—	100.0
	Night	—	—	—	—	—	—	100.0

FLIGHT TRACKS – TAKEOFFS (Estimated 2001 and 2021)																
Aircraft Type	Percentage of Track Usage by Runway															
	Runway 18R			Runway 36L		Runway 18L			Runway 36R	Runway 6			Runway 24			Helipad
	Straight Out	45° Right Turn	45° Left Turn	Straight Out	45° Left Turn	Straight Out	45° Right Turn	45° Left Turn	Straight Out	Straight Out	45° Right Turn	45° Left Turn	Straight Out	45° Right Turn	45° Left Turn	Straight Out
Single-Engine, Propeller, Fixed and Variable Pitch	50.0	30.0	20.0	20.0	80.0	50.0	30.0	20.0	100.0	70.0	15.0	15.0	40.0	20.0	40.0	–
Twin-Engine, Propeller, Piston	50.0	30.0	20.0	20.0	80.0	50.0	30.0	20.0	100.0	70.0	15.0	15.0	40.0	20.0	40.0	–
Twin-Engine, Turboprop	20.0	60.0	20.0	30.0	70.0	20.0	60.0	20.0	100.0	70.0	15.0	15.0	40.0	20.0	40.0	–
All Business Jets	100.0	–	–	100.0	–	–	–	–	–	100.0	–	–	100.0	–	–	–
Helicopters	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100.0

FLIGHT TRACKS – LANDINGS (Estimated 2001 and 2021)													
Aircraft Type	Percentage of Track Usage by Runway												
	Runway 18R			Runway 36L	Runway 18L		Runway 36R	Runway 6	Runway 24				Helipad
	Straight In	Close-in Right Turn	Right Turn	Straight In	Straight In	Left Turn	Straight In	Straight In	Straight In	Close-in Right Turn	Right Turn	Straight In	Straight In
Single-Engine, Propeller, Fixed and Variable Pitch	20.0	40.0	40.0	100.0	20.0	80.0	100.0	100.0	20.0	40.0	40.0	–	–
Twin-Engine, Propeller, Piston	10.0	50.0	40.0	100.0	20.0	80.0	100.0	100.0	10.0	50.0	40.0	–	–
Twin-Engine, Turboprop	20.0	20.0	60.0	100.0	–	–	–	100.0	20.0	20.0	60.0	–	–
All Business Jets	100.0	–	–	100.0	–	–	–	100.0	100.0	–	–	–	–
Helicopter	–	–	–	–	–	–	–	–	–	–	–	–	100.0

Source: Data compiled by Mead & Hunt (July 2003)