

APPENDIX G

FUTURE (2021) NOISE EXPOSURE MAP/ NOISE COMPATIBILITY PROGRAM

A Future (2021) noise exposure contour was prepared to understand potential noise impacts within the ten-year timeline for planning purposes. The Future (2021) Noise Exposure Map/Noise Compatibility Program (NEM/NCP) represents the anticipated noise levels for a typical day in 2021, with the implementation of all recommended noise abatement measures. The Future (2021) NEM/NCP was prepared using the Federal Aviation Administration's (FAA's) Integrated Noise Model (INM) Version 7.0b. Noise exposure contours were prepared at levels of 65, 70, and 75 Day-Night Average Sound Level (DNL). This appendix presents the methodology and input data used to prepare the Future (2021) NEM/NCP for Seattle-Tacoma International Airport (Sea-Tac Airport).

G.1 NOISE MODELING METHODOLOGY

Number of Operations and Fleet Mix

The number of operations included in the Future (2021) NEM/NCP is based on the Forecast of Aviation Activity prepared for this Part 150 Study. The forecast is based upon aviation industry trends and specific airline activity at Sea-Tac Airport. More information about this forecast is included in **Chapter Two, Forecast**. The Future (2021) condition includes 419,597 annual operations or 1,149.58 average-annual day operations, a projected increase of 15.4 percent from the Future (2016) Baseline operating levels. **Table G-1, Distribution of Average Day Operations by Aircraft Type Future (2021) NEM/NCP**, provides a summary of the average daily operations and fleet mix at Sea-Tac Airport, organized by aircraft type, operation type, and time of day that was modeled for Future (2021) conditions.

Table G-1
DISTRIBUTION OF AVERAGE DAY OPERATIONS BY AIRCRAFT TYPE –
FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

AIRCRAFT TYPE	INM TYPE	ARRIVALS		DEPARTURES		TOTAL
		DAY	NIGHT	DAY	NIGHT	
LARGE JETS						
Boeing 747-200	747200	0.29	0.05	0.28	0.05	0.68
Boeing 747-400	747400	6.06	1.07	6.06	1.07	14.25
Boeing 767-300	767300	1.47	0.26	1.46	0.26	3.45
Boeing 777-200	777200	3.22	0.57	3.21	0.57	7.56
Boeing 777-300	777300	0.48	0.09	0.49	0.09	1.14
Airbus A300B4-203	A300B4-203	0.81	0.14	0.81	0.14	1.92
Airbus A330-301	A330-301	3.44	0.61	3.44	0.61	8.09
Airbus A330-343	A330-343	5.20	0.92	5.19	0.92	12.22
Airbus A340-200	A340-211	0.40	0.07	0.40	0.07	0.95
Douglas DC10-10	DC1010	2.64	0.47	2.64	0.47	6.22
McDonnell Douglas MD-11	MD11GE	0.81	0.14	0.81	0.14	1.91
Boeing 737-700	737700	65.63	11.58	65.63	11.58	154.43
Boeing 737-800	737800	160.96	28.40	160.96	28.40	378.73
Boeing 737	737QN	0.00	0.00	0.00	0.00	0.01
Boeing 757-300	757300	9.32	1.64	9.32	1.64	21.92
Boeing 757-200	757RR	0.31	0.06	0.31	0.05	0.73
Airbus A319	A319-131	13.86	2.45	13.86	2.45	32.60
Airbus A320-211	A320-211	16.27	2.87	16.27	2.87	38.27
Airbus A320-232	A320-232	36.21	6.39	36.21	6.39	85.19
Airbus A321-232	A321-232	3.56	0.63	3.56	0.63	8.39
Sub-Total		330.95	58.40	330.91	58.40	778.66
REGIONAL JETS						
Bombardier CRJ900	CRJ9-ER	24.41	1.56	24.41	1.56	51.94
Sub-Total		24.41	1.56	24.41	1.56	51.94
BUSINESS JETS						
Twin Engine Regional Jet	CNA500	0.10	0.01	0.10	0.01	0.21
Twin Engine Regional Jet	CNA750	0.20	0.01	0.20	0.02	0.42
Twin Engine Regional Jet	GIV	0.11	0.01	0.11	0.01	0.23
Twin Engine Regional Jet	GV	6.56	0.49	6.56	0.49	14.11
Twin Engine Regional Jet	IA1125	0.25	0.02	0.25	0.02	0.54
Twin Engine Regional Jet	LEAR35	0.44	0.03	0.44	0.03	0.95
Twin Engine Regional Jet	MU3001	0.67	0.05	0.67	0.05	1.44
Twin Engine Regional Jet	CIT3	0.12	0.01	0.12	0.01	0.25
Twin Engine Regional Jet	CL600	0.65	0.05	0.65	0.05	1.39
Twin Engine Regional Jet	CL601	2.98	0.22	2.98	0.22	6.41
Sub-Total		12.07	0.91	12.08	0.91	25.98

Table G-1, Continued
DISTRIBUTION OF AVERAGE DAY OPERATIONS BY AIRCRAFT TYPE
FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

AIRCRAFT TYPE	INM TYPE	ARRIVALS		DEPARTURES		TOTAL
		DAY	NIGHT	DAY	NIGHT	
COMMUTER PROPS						
Avions de Transport Regional ATR-42	ATR42	0.27	0.03	0.27	0.03	0.59
Avions de Transport Regional ATR-72	ATR72	0.13	0.01	0.13	0.02	0.29
Commuter Prop	DHC830	122.82	12.15	120.12	14.85	269.93
Commuter Prop	CNA441	5.85	0.07	4.90	1.01	11.83
Sub-Total		129.07	12.25	125.42	15.91	282.65
GENERAL AVIATION PROPS						
GA Prop	CNA172	0.36	0.00	0.30	0.07	0.72
GA Prop	CNA208	4.64	0.00	3.81	0.84	9.29
GA Prop	PA31	0.17	0.00	0.14	0.03	0.34
Sub-Total		5.17	0.00	4.25	0.93	10.34
Grand Total		501.67	73.12	497.07	77.71	1,149.58

Note: Day = 7:00 a.m. to 9:59 p.m., Night = 10:00 p.m. to 6:59 a.m.

Source: Forecast of Aviation Activity, Landrum & Brown, 2011.

Runway End Utilization

Average-annual day runway end utilization for Future (2021) conditions at Sea-Tac Airport is expected to remain similar to the Existing (2011) conditions, with minor variation due to a slight change in fleet mix. The runway use percentages that were modeled for the Future (2021) NEM/NCP noise exposure contour are shown in **Table G-2, Runway End Utilization – Future (2021) NEM/NCP**.

Aircraft are permitted to conduct departures on Runway 34R from the intersection at Taxiway Q. When performing this maneuver, aircraft begin their take-off roll from the intersection of Runway 34R and Taxiway Q. Approximately ten percent of departures from Runway 34R, excluding heavy jets, are expected to be conducted from the Taxiway Q intersection.

Table G-2
RUNWAY END UTILIZATION – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

DAYTIME ARRIVALS						
AIRCRAFT CATEGORY	16C	16L	16R	34C	34L	34R
Large Jets	21.0%	20.0%	23.0%	11.0%	11.0%	14.0%
Regional Jets	23.7%	17.4%	24.9%	12.7%	9.9%	11.4%
Business Jets	14.3%	7.4%	41.2%	6.2%	23.6%	7.4%
Turboprops	25.1%	16.8%	23.7%	12.1%	11.7%	10.5%
General Aviation Props	27.0%	19.0%	12.0%	18.0%	15.0%	9.0%
DAYTIME DEPARTURES						
AIRCRAFT CATEGORY	16C	16L	16R	34C	34L	34R
Large Jets	20.0%	46.0%	0.0%	17.0%	0.0%	17.0%
Regional Jets	23.9%	41.7%	0.0%	18.0%	0.1%	16.3%
Business Jets	26.2%	22.1%	15.1%	27.3%	4.0%	5.4%
Turboprops	19.0%	43.7%	1.0%	18.7%	2.3%	15.3%
General Aviation Props	14.0%	11.0%	0.0%	27.0%	0.0%	48.0%
NIGHTTIME ARRIVALS						
AIRCRAFT CATEGORY	16C	16L	16R	34C	34L	34R
Large Jets	51.0%	10.0%	2.0%	28.0%	1.0%	8.0%
Regional Jets	56.3%	8.3%	0.9%	25.0%	0.0%	9.5%
Business Jets	66.9%	0.0%	33.1%	0.0%	0.0%	0.0%
Turboprops	56.5%	7.6%	5.3%	25.0%	0.5%	5.1%
General Aviation Props	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NIGHTTIME DEPARTURES						
AIRCRAFT CATEGORY	16C	16L	16R	34C	34L	34R
Large Jets	1.0%	64.0%	0.0%	5.0%	0.0%	30.0%
Regional Jets	1.4%	71.2%	0.0%	8.7%	0.0%	18.7%
Business Jets	52.0%	13.0%	0.0%	35.0%	0.0%	0.0%
Turboprops	9.7%	56.9%	0.4%	7.2%	1.3%	24.4%
General Aviation Props	25.0%	75.0%	0.0%	0.0%	0.0%	0.0%

Note: Day = 7:00 a.m. to 9:59 p.m., Night = 10:00 p.m. to 6:59 a.m.

Source: Seattle-Tacoma International Airport ANOMS Data, 2009; Landrum & Brown, 2011.

Flight Tracks

There are two components to flight tracks used for noise modeling: flight track definition/location and percentage of use. Flight track definition and percent utilization was based on ANOMS radar data from calendar year 2009. Flight track locations are expected to remain the same for the Future (2021) NEM/NCP condition as shown on Exhibit 3-12 and Exhibit 3-13 in **Chapter Three, Noise Analysis**. Flight track distribution percentages expected to remain similar to the Existing (2011) conditions, with minor variation due to a slight change in fleet mix. **Table G-3, INM Arrival Flight Tracks – Future (2021) NEM/NCP** shows the INM flight track distribution percentages for arrival flight tracks; and **Table G-4, INM Departure Flight Tracks – Future (2021) NEM/NCP** shows the INM flight track distribution percentages for departure flight tracks that were modeled for the Future (2021) NEM/NCP noise exposure contour.

Table G-3
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16C	16CA2A	1.0%	1.0%	0.7%	1.1%	1.0%
16C	16CA2A1	0.6%	0.6%	0.4%	0.7%	0.7%
16C	16CA2A2	0.6%	0.6%	0.4%	0.7%	0.7%
16C	16CA2A3	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA2A4	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA2B	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA2B1	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CA2B2	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CA2B3	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA2B4	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA2C	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CA2C1	0.1%	0.1%	0.0%	0.1%	0.1%
16C	16CA2C2	0.1%	0.1%	0.0%	0.1%	0.1%
16C	16CA2C3	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA2C4	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA3A	1.5%	1.5%	1.0%	1.6%	1.6%
16C	16CA3A1	0.9%	0.9%	0.7%	1.0%	1.0%
16C	16CA3A2	0.9%	0.9%	0.7%	1.0%	1.0%
16C	16CA3A3	0.2%	0.2%	0.2%	0.3%	0.3%
16C	16CA3A4	0.2%	0.2%	0.2%	0.3%	0.3%
16C	16CA3B	1.2%	1.2%	0.8%	1.3%	1.3%
16C	16CA3B1	0.7%	0.8%	0.5%	0.8%	0.8%
16C	16CA3B2	0.7%	0.8%	0.5%	0.8%	0.8%
16C	16CA3B3	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA3B4	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA3C	0.3%	0.3%	0.2%	0.3%	0.3%
16C	16CA3C1	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA3C2	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA3C3	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CA3C4	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CA4A	1.7%	1.7%	1.2%	1.9%	1.8%
16C	16CA4A1	1.5%	1.5%	1.0%	1.6%	1.6%
16C	16CA4A2	1.5%	1.5%	1.0%	1.6%	1.6%
16C	16CA4A3	0.9%	0.9%	0.7%	1.0%	1.0%
16C	16CA4A4	0.9%	0.9%	0.7%	1.0%	1.0%
16C	16CA4A5	0.4%	0.4%	0.3%	0.5%	0.5%
16C	16CA4A6	0.4%	0.4%	0.3%	0.5%	0.5%
16C	16CA4A7	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA4A8	0.2%	0.2%	0.1%	0.2%	0.2%
16C	16CA4B	0.1%	0.1%	0.0%	0.1%	0.1%
16C	16CA4B1	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CA4B2	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CA4B3	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA4B4	0.0%	0.0%	0.0%	0.0%	0.0%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16C	16CA4B5	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA4B6	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA4B7	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA4B8	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA5A	1.4%	1.4%	1.0%	1.5%	1.5%
16C	16CA5A1	1.2%	1.2%	0.9%	1.3%	1.3%
16C	16CA5A2	1.2%	1.2%	0.9%	1.3%	1.3%
16C	16CA5A3	0.8%	0.8%	0.5%	0.8%	0.8%
16C	16CA5A4	0.8%	0.8%	0.5%	0.8%	0.8%
16C	16CA5A5	0.4%	0.4%	0.3%	0.4%	0.4%
16C	16CA5A6	0.4%	0.4%	0.3%	0.4%	0.4%
16C	16CA5A7	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CA5A8	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CA5B	0.1%	0.1%	0.0%	0.1%	0.1%
16C	16CA5B1	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CA5B2	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CA5B3	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA5B4	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA5B5	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA5B6	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA5B7	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CA5B8	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA2A	0.7%	0.7%	0.3%	0.6%	0.7%
16L	16LA2A1	0.5%	0.4%	0.2%	0.4%	0.5%
16L	16LA2A2	0.5%	0.4%	0.2%	0.4%	0.5%
16L	16LA2A3	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA2A4	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA2B	0.1%	0.1%	0.1%	0.1%	0.1%
16L	16LA2B1	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA2B2	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA2B3	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA2B4	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA2C	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA2C1	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA2C2	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA2C3	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA2C4	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA3A	1.1%	1.0%	0.4%	0.9%	1.1%
16L	16LA3A1	0.7%	0.6%	0.3%	0.6%	0.7%
16L	16LA3A2	0.7%	0.6%	0.3%	0.6%	0.7%
16L	16LA3A3	0.2%	0.2%	0.1%	0.2%	0.2%
16L	16LA3A4	0.2%	0.2%	0.1%	0.2%	0.2%
16L	16LA3B	0.9%	0.8%	0.3%	0.7%	0.9%
16L	16LA3B1	0.5%	0.5%	0.2%	0.5%	0.6%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16L	16LA3B2	0.5%	0.5%	0.2%	0.5%	0.6%
16L	16LA3B3	0.1%	0.1%	0.1%	0.1%	0.1%
16L	16LA3B4	0.1%	0.1%	0.1%	0.1%	0.1%
16L	16LA3C	0.2%	0.2%	0.1%	0.2%	0.2%
16L	16LA3C1	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA3C2	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA3C3	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA3C4	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4A	1.2%	1.1%	0.5%	1.1%	1.3%
16L	16LA4A1	1.1%	1.0%	0.4%	0.9%	1.1%
16L	16LA4A2	1.1%	1.0%	0.4%	0.9%	1.1%
16L	16LA4A3	0.7%	0.6%	0.3%	0.6%	0.7%
16L	16LA4A4	0.7%	0.6%	0.3%	0.6%	0.7%
16L	16LA4A5	0.3%	0.3%	0.1%	0.3%	0.3%
16L	16LA4A6	0.3%	0.3%	0.1%	0.3%	0.3%
16L	16LA4A7	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA4A8	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA4B	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B1	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B2	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B3	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B4	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B5	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B6	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B7	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA4B8	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5A	1.0%	0.9%	0.4%	0.9%	1.1%
16L	16LA5A1	0.9%	0.8%	0.3%	0.8%	0.9%
16L	16LA5A2	0.9%	0.8%	0.3%	0.8%	0.9%
16L	16LA5A3	0.6%	0.5%	0.2%	0.5%	0.6%
16L	16LA5A4	0.6%	0.5%	0.2%	0.5%	0.6%
16L	16LA5A5	0.3%	0.2%	0.1%	0.2%	0.3%
16L	16LA5A6	0.3%	0.2%	0.1%	0.2%	0.3%
16L	16LA5A7	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA5A8	0.1%	0.1%	0.0%	0.1%	0.1%
16L	16LA5B	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B1	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B2	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B3	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B4	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B5	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B6	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B7	0.0%	0.0%	0.0%	0.0%	0.0%
16L	16LA5B8	0.0%	0.0%	0.0%	0.0%	0.0%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16R	16RA2A	0.8%	0.9%	1.6%	0.9%	0.5%
16R	16RA2A1	0.5%	0.6%	1.0%	0.5%	0.3%
16R	16RA2A2	0.5%	0.6%	1.0%	0.5%	0.3%
16R	16RA2A3	0.1%	0.1%	0.3%	0.1%	0.1%
16R	16RA2A4	0.1%	0.1%	0.3%	0.1%	0.1%
16R	16RA2B	0.2%	0.2%	0.3%	0.2%	0.1%
16R	16RA2B1	0.1%	0.1%	0.2%	0.1%	0.1%
16R	16RA2B2	0.1%	0.1%	0.2%	0.1%	0.1%
16R	16RA2B3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA2B4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA2C	0.1%	0.1%	0.2%	0.1%	0.0%
16R	16RA2C1	0.0%	0.1%	0.1%	0.1%	0.0%
16R	16RA2C2	0.0%	0.1%	0.1%	0.1%	0.0%
16R	16RA2C3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA2C4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA3A	1.1%	1.4%	2.4%	1.3%	0.7%
16R	16RA3A1	0.7%	0.9%	1.5%	0.8%	0.4%
16R	16RA3A2	0.7%	0.9%	1.5%	0.8%	0.4%
16R	16RA3A3	0.2%	0.2%	0.4%	0.2%	0.1%
16R	16RA3A4	0.2%	0.2%	0.4%	0.2%	0.1%
16R	16RA3B	0.9%	1.1%	1.9%	1.0%	0.6%
16R	16RA3B1	0.6%	0.7%	1.2%	0.6%	0.4%
16R	16RA3B2	0.6%	0.7%	1.2%	0.6%	0.4%
16R	16RA3B3	0.2%	0.2%	0.3%	0.2%	0.1%
16R	16RA3B4	0.2%	0.2%	0.3%	0.2%	0.1%
16R	16RA3C	0.2%	0.3%	0.5%	0.3%	0.1%
16R	16RA3C1	0.1%	0.2%	0.3%	0.2%	0.1%
16R	16RA3C2	0.1%	0.2%	0.3%	0.2%	0.1%
16R	16RA3C3	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RA3C4	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RA4A	1.3%	1.6%	2.7%	1.5%	0.8%
16R	16RA4A1	1.1%	1.3%	2.3%	1.3%	0.7%
16R	16RA4A2	1.1%	1.3%	2.3%	1.3%	0.7%
16R	16RA4A3	0.7%	0.9%	1.5%	0.8%	0.4%
16R	16RA4A4	0.7%	0.9%	1.5%	0.8%	0.4%
16R	16RA4A5	0.3%	0.4%	0.7%	0.4%	0.2%
16R	16RA4A6	0.3%	0.4%	0.7%	0.4%	0.2%
16R	16RA4A7	0.1%	0.1%	0.2%	0.1%	0.1%
16R	16RA4A8	0.1%	0.1%	0.2%	0.1%	0.1%
16R	16RA4B	0.0%	0.1%	0.1%	0.0%	0.0%
16R	16RA4B1	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RA4B2	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RA4B3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA4B4	0.0%	0.0%	0.0%	0.0%	0.0%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16R	16RA4B5	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA4B6	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA4B7	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA4B8	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA5A	1.1%	1.3%	2.3%	1.2%	0.7%
16R	16RA5A1	0.9%	1.1%	1.9%	1.1%	0.6%
16R	16RA5A2	0.9%	1.1%	1.9%	1.1%	0.6%
16R	16RA5A3	0.6%	0.7%	1.2%	0.7%	0.4%
16R	16RA5A4	0.6%	0.7%	1.2%	0.7%	0.4%
16R	16RA5A5	0.3%	0.3%	0.6%	0.3%	0.2%
16R	16RA5A6	0.3%	0.3%	0.6%	0.3%	0.2%
16R	16RA5A7	0.1%	0.1%	0.2%	0.1%	0.1%
16R	16RA5A8	0.1%	0.1%	0.2%	0.1%	0.1%
16R	16RA5B	0.0%	0.1%	0.1%	0.0%	0.0%
16R	16RA5B1	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RA5B2	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RA5B3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA5B4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA5B5	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA5B6	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA5B7	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RA5B8	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA2A	0.4%	0.4%	0.2%	0.4%	0.6%
34C	34CA2A1	0.3%	0.3%	0.1%	0.3%	0.4%
34C	34CA2A2	0.3%	0.3%	0.1%	0.3%	0.4%
34C	34CA2A3	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2A4	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2B	0.4%	0.4%	0.2%	0.4%	0.5%
34C	34CA2B1	0.2%	0.2%	0.1%	0.2%	0.3%
34C	34CA2B2	0.2%	0.2%	0.1%	0.2%	0.3%
34C	34CA2B3	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2B4	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2C	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2C1	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2C2	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2C3	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA2C4	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA2D	0.4%	0.4%	0.2%	0.4%	0.5%
34C	34CA2D1	0.2%	0.2%	0.1%	0.2%	0.3%
34C	34CA2D2	0.2%	0.2%	0.1%	0.2%	0.3%
34C	34CA2D3	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA2D4	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA3A	0.9%	0.9%	0.4%	0.9%	1.3%
34C	34CA3A1	0.6%	0.6%	0.3%	0.6%	0.8%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34C	34CA3A2	0.6%	0.6%	0.3%	0.6%	0.8%
34C	34CA3A3	0.2%	0.2%	0.1%	0.2%	0.2%
34C	34CA3A4	0.2%	0.2%	0.1%	0.2%	0.2%
34C	34CA3B	0.9%	0.9%	0.4%	0.9%	1.2%
34C	34CA3B1	0.6%	0.6%	0.2%	0.6%	0.7%
34C	34CA3B2	0.6%	0.6%	0.2%	0.6%	0.7%
34C	34CA3B3	0.1%	0.1%	0.1%	0.1%	0.2%
34C	34CA3B4	0.1%	0.1%	0.1%	0.1%	0.2%
34C	34CA3C	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA3C1	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA3C2	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA3C3	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA3C4	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA4A	0.7%	0.7%	0.3%	0.6%	0.9%
34C	34CA4A1	0.6%	0.6%	0.3%	0.6%	0.8%
34C	34CA4A2	0.6%	0.6%	0.3%	0.6%	0.8%
34C	34CA4A3	0.4%	0.4%	0.2%	0.4%	0.5%
34C	34CA4A4	0.4%	0.4%	0.2%	0.4%	0.5%
34C	34CA4A5	0.2%	0.2%	0.1%	0.2%	0.2%
34C	34CA4A6	0.2%	0.2%	0.1%	0.2%	0.2%
34C	34CA4A7	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA4A8	0.1%	0.1%	0.0%	0.1%	0.1%
34C	34CA5A	0.5%	0.4%	0.2%	0.4%	0.6%
34C	34CA5A1	0.4%	0.4%	0.2%	0.4%	0.5%
34C	34CA5A2	0.4%	0.4%	0.2%	0.4%	0.5%
34C	34CA5A3	0.2%	0.2%	0.1%	0.2%	0.3%
34C	34CA5A4	0.2%	0.2%	0.1%	0.2%	0.3%
34C	34CA5A5	0.1%	0.1%	0.0%	0.1%	0.2%
34C	34CA5A6	0.1%	0.1%	0.0%	0.1%	0.2%
34C	34CA5A7	0.0%	0.0%	0.0%	0.0%	0.1%
34C	34CA5A8	0.0%	0.0%	0.0%	0.0%	0.1%
34C	34CA5B	0.0%	0.0%	0.0%	0.1%	0.1%
34C	34CA5B1	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5B2	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C1	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C2	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C3	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C4	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C5	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C6	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C7	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CA5C8	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA2A	0.3%	0.3%	0.7%	0.3%	0.5%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34L	34LA2A1	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA2A2	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA2A3	0.0%	0.0%	0.1%	0.1%	0.1%
34L	34LA2A4	0.0%	0.0%	0.1%	0.1%	0.1%
34L	34LA2B	0.3%	0.3%	0.6%	0.3%	0.4%
34L	34LA2B1	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA2B2	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA2B3	0.0%	0.0%	0.1%	0.0%	0.1%
34L	34LA2B4	0.0%	0.0%	0.1%	0.0%	0.1%
34L	34LA2C	0.1%	0.1%	0.2%	0.1%	0.1%
34L	34LA2C1	0.0%	0.0%	0.1%	0.1%	0.1%
34L	34LA2C2	0.0%	0.0%	0.1%	0.1%	0.1%
34L	34LA2C3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA2C4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA2D	0.3%	0.3%	0.6%	0.3%	0.4%
34L	34LA2D1	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA2D2	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA2D3	0.0%	0.0%	0.1%	0.0%	0.1%
34L	34LA2D4	0.0%	0.0%	0.1%	0.0%	0.1%
34L	34LA3A	0.7%	0.6%	1.5%	0.7%	1.0%
34L	34LA3A1	0.4%	0.4%	1.0%	0.5%	0.7%
34L	34LA3A2	0.4%	0.4%	1.0%	0.5%	0.7%
34L	34LA3A3	0.1%	0.1%	0.2%	0.1%	0.2%
34L	34LA3A4	0.1%	0.1%	0.2%	0.1%	0.2%
34L	34LA3B	0.6%	0.6%	1.4%	0.7%	1.0%
34L	34LA3B1	0.4%	0.4%	0.9%	0.4%	0.6%
34L	34LA3B2	0.4%	0.4%	0.9%	0.4%	0.6%
34L	34LA3B3	0.1%	0.1%	0.2%	0.1%	0.2%
34L	34LA3B4	0.1%	0.1%	0.2%	0.1%	0.2%
34L	34LA3C	0.1%	0.1%	0.2%	0.1%	0.1%
34L	34LA3C1	0.0%	0.0%	0.1%	0.1%	0.1%
34L	34LA3C2	0.0%	0.0%	0.1%	0.1%	0.1%
34L	34LA3C3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA3C4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA4A	0.5%	0.5%	1.1%	0.5%	0.7%
34L	34LA4A1	0.4%	0.4%	1.0%	0.5%	0.6%
34L	34LA4A2	0.4%	0.4%	1.0%	0.5%	0.6%
34L	34LA4A3	0.3%	0.3%	0.6%	0.3%	0.4%
34L	34LA4A4	0.3%	0.3%	0.6%	0.3%	0.4%
34L	34LA4A5	0.1%	0.1%	0.3%	0.1%	0.2%
34L	34LA4A6	0.1%	0.1%	0.3%	0.1%	0.2%
34L	34LA4A7	0.0%	0.0%	0.1%	0.0%	0.1%
34L	34LA4A8	0.0%	0.0%	0.1%	0.0%	0.1%
34L	34LA5A	0.3%	0.3%	0.7%	0.4%	0.5%

**Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34L	34LA5A1	0.3%	0.3%	0.6%	0.3%	0.4%
34L	34LA5A2	0.3%	0.3%	0.6%	0.3%	0.4%
34L	34LA5A3	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA5A4	0.2%	0.2%	0.4%	0.2%	0.3%
34L	34LA5A5	0.1%	0.1%	0.2%	0.1%	0.1%
34L	34LA5A6	0.1%	0.1%	0.2%	0.1%	0.1%
34L	34LA5A7	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LA5A8	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LA5B	0.0%	0.0%	0.0%	0.1%	0.1%
34L	34LA5B1	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5B2	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C1	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C2	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C5	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C6	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C7	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LA5C8	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA2A	0.4%	0.3%	0.2%	0.3%	0.3%
34R	34RA2A1	0.3%	0.2%	0.1%	0.2%	0.2%
34R	34RA2A2	0.3%	0.2%	0.1%	0.2%	0.2%
34R	34RA2A3	0.1%	0.1%	0.0%	0.1%	0.0%
34R	34RA2A4	0.1%	0.1%	0.0%	0.1%	0.0%
34R	34RA2B	0.4%	0.3%	0.2%	0.3%	0.2%
34R	34RA2B1	0.2%	0.2%	0.1%	0.2%	0.2%
34R	34RA2B2	0.2%	0.2%	0.1%	0.2%	0.2%
34R	34RA2B3	0.1%	0.0%	0.0%	0.0%	0.0%
34R	34RA2B4	0.1%	0.0%	0.0%	0.0%	0.0%
34R	34RA2C	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA2C1	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RA2C2	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RA2C3	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA2C4	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA2D	0.4%	0.3%	0.2%	0.3%	0.2%
34R	34RA2D1	0.2%	0.2%	0.1%	0.2%	0.2%
34R	34RA2D2	0.2%	0.2%	0.1%	0.2%	0.2%
34R	34RA2D3	0.1%	0.0%	0.0%	0.0%	0.0%
34R	34RA2D4	0.1%	0.0%	0.0%	0.0%	0.0%
34R	34RA3A	0.9%	0.8%	0.5%	0.7%	0.6%
34R	34RA3A1	0.6%	0.5%	0.3%	0.4%	0.4%
34R	34RA3A2	0.6%	0.5%	0.3%	0.4%	0.4%
34R	34RA3A3	0.1%	0.1%	0.1%	0.1%	0.1%

Table G-3, Continued
INM ARRIVAL FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34R	34RA3A4	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA3B	0.9%	0.7%	0.5%	0.7%	0.6%
34R	34RA3B1	0.5%	0.5%	0.3%	0.4%	0.4%
34R	34RA3B2	0.5%	0.5%	0.3%	0.4%	0.4%
34R	34RA3B3	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA3B4	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA3C	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA3C1	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RA3C2	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RA3C3	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA3C4	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA4A	0.7%	0.6%	0.4%	0.5%	0.4%
34R	34RA4A1	0.6%	0.5%	0.3%	0.4%	0.4%
34R	34RA4A2	0.6%	0.5%	0.3%	0.4%	0.4%
34R	34RA4A3	0.4%	0.3%	0.2%	0.3%	0.2%
34R	34RA4A4	0.4%	0.3%	0.2%	0.3%	0.2%
34R	34RA4A5	0.2%	0.1%	0.1%	0.1%	0.1%
34R	34RA4A6	0.2%	0.1%	0.1%	0.1%	0.1%
34R	34RA4A7	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RA4A8	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RA5A	0.4%	0.4%	0.2%	0.3%	0.3%
34R	34RA5A1	0.4%	0.3%	0.2%	0.3%	0.3%
34R	34RA5A2	0.4%	0.3%	0.2%	0.3%	0.3%
34R	34RA5A3	0.2%	0.2%	0.1%	0.2%	0.2%
34R	34RA5A4	0.2%	0.2%	0.1%	0.2%	0.2%
34R	34RA5A5	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA5A6	0.1%	0.1%	0.1%	0.1%	0.1%
34R	34RA5A7	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5A8	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5B	0.0%	0.0%	0.0%	0.1%	0.1%
34R	34RA5B1	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5B2	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C1	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C2	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C3	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C4	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C5	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C6	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C7	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RA5C8	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Seattle-Tacoma International Airport ANOMS Data, 2009; Landrum & Brown, 2011.

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**Table G-4
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16C	16CD1A	2.1%	2.8%	3.5%	0.0%	0.0%
16C	16CD1A1	1.3%	1.8%	2.2%	0.0%	0.0%
16C	16CD1A2	1.3%	1.8%	2.2%	0.0%	0.0%
16C	16CD1A3	0.3%	0.5%	0.6%	0.0%	0.0%
16C	16CD1A4	0.3%	0.5%	0.6%	0.0%	0.0%
16C	16CD1B	0.5%	0.7%	0.9%	0.7%	0.6%
16C	16CD1B1	0.3%	0.4%	0.5%	0.4%	0.4%
16C	16CD1B2	0.3%	0.4%	0.5%	0.4%	0.4%
16C	16CD1B3	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CD1B4	0.1%	0.1%	0.1%	0.1%	0.1%
16C	16CD1C	0.0%	0.0%	0.0%	0.3%	0.3%
16C	16CD1C1	0.0%	0.0%	0.0%	0.2%	0.2%
16C	16CD1C2	0.0%	0.0%	0.0%	0.2%	0.2%
16C	16CD1C3	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CD1C4	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CD1D	0.1%	0.2%	0.2%	0.0%	0.0%
16C	16CD1D1	0.1%	0.1%	0.1%	0.0%	0.0%
16C	16CD1D2	0.1%	0.1%	0.1%	0.0%	0.0%
16C	16CD1D3	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CD1D4	0.0%	0.0%	0.0%	0.0%	0.0%
16C	16CD2A	0.3%	0.4%	0.5%	0.0%	0.0%
16C	16CD2A1	0.2%	0.3%	0.3%	0.0%	0.0%
16C	16CD2A2	0.2%	0.3%	0.3%	0.0%	0.0%
16C	16CD2A3	0.1%	0.1%	0.1%	0.0%	0.0%
16C	16CD2A4	0.1%	0.1%	0.1%	0.0%	0.0%
16C	16CD2B	2.1%	2.8%	3.5%	0.0%	0.0%
16C	16CD2B1	1.3%	1.8%	2.2%	0.0%	0.0%
16C	16CD2B2	1.3%	1.8%	2.2%	0.0%	0.0%
16C	16CD2B3	0.3%	0.5%	0.6%	0.0%	0.0%
16C	16CD2B4	0.3%	0.5%	0.6%	0.0%	0.0%
16C	16CD3A	1.0%	1.3%	1.6%	0.0%	0.0%
16C	16CD3A1	0.6%	0.8%	1.0%	0.0%	0.0%
16C	16CD3A2	0.6%	0.8%	1.0%	0.0%	0.0%
16C	16CD3A3	0.2%	0.2%	0.3%	0.0%	0.0%
16C	16CD3A4	0.2%	0.2%	0.3%	0.0%	0.0%
16C	16CD3B	0.4%	0.5%	0.6%	0.0%	0.0%
16C	16CD3B1	0.3%	0.3%	0.4%	0.0%	0.0%
16C	16CD3B2	0.3%	0.3%	0.4%	0.0%	0.0%
16C	16CD3B3	0.1%	0.1%	0.1%	0.0%	0.0%
16C	16CD3B4	0.1%	0.1%	0.1%	0.0%	0.0%
16C	16CD4A	0.0%	0.0%	0.0%	1.7%	1.5%
16C	16CD4A1	0.0%	0.0%	0.0%	1.1%	1.0%
16C	16CD4A2	0.0%	0.0%	0.0%	1.1%	1.0%
16C	16CD4A3	0.0%	0.0%	0.0%	0.3%	0.3%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16C	16CD4A4	0.0%	0.0%	0.0%	0.3%	0.3%
16C	16CD4B	0.0%	0.0%	0.0%	1.7%	1.5%
16C	16CD4B1	0.0%	0.0%	0.0%	1.1%	1.0%
16C	16CD4B2	0.0%	0.0%	0.0%	1.1%	1.0%
16C	16CD4B3	0.0%	0.0%	0.0%	0.3%	0.3%
16C	16CD4B4	0.0%	0.0%	0.0%	0.3%	0.3%
16C	16CD4C	0.0%	0.0%	0.0%	0.3%	0.3%
16C	16CD4C1	0.0%	0.0%	0.0%	0.2%	0.2%
16C	16CD4C2	0.0%	0.0%	0.0%	0.2%	0.2%
16C	16CD4C3	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CD4C4	0.0%	0.0%	0.0%	0.1%	0.0%
16C	16CD5A	0.0%	0.0%	0.0%	0.7%	0.6%
16C	16CD5A1	0.0%	0.0%	0.0%	0.4%	0.4%
16C	16CD5A2	0.0%	0.0%	0.0%	0.4%	0.4%
16C	16CD5A3	0.0%	0.0%	0.0%	0.1%	0.1%
16C	16CD5A4	0.0%	0.0%	0.0%	0.1%	0.1%
16C	16CD5B	0.0%	0.0%	0.0%	0.7%	0.6%
16C	16CD5B1	0.0%	0.0%	0.0%	0.4%	0.4%
16C	16CD5B2	0.0%	0.0%	0.0%	0.4%	0.4%
16C	16CD5B3	0.0%	0.0%	0.0%	0.1%	0.1%
16C	16CD5B4	0.0%	0.0%	0.0%	0.1%	0.1%
16C	16CD5C	0.0%	0.0%	0.0%	0.7%	0.6%
16C	16CD5C1	0.0%	0.0%	0.0%	0.4%	0.4%
16C	16CD5C2	0.0%	0.0%	0.0%	0.4%	0.4%
16C	16CD5C3	0.0%	0.0%	0.0%	0.1%	0.1%
16C	16CD5C4	0.0%	0.0%	0.0%	0.1%	0.1%
16L	16LD1A	6.0%	5.4%	2.6%	0.0%	0.0%
16L	16LD1A1	3.8%	3.4%	1.7%	0.0%	0.0%
16L	16LD1A2	3.8%	3.4%	1.7%	0.0%	0.0%
16L	16LD1A3	1.0%	0.9%	0.4%	0.0%	0.0%
16L	16LD1A4	1.0%	0.9%	0.4%	0.0%	0.0%
16L	16LD1B	1.5%	1.3%	0.7%	1.7%	0.9%
16L	16LD1B1	1.0%	0.8%	0.4%	1.1%	0.5%
16L	16LD1B2	1.0%	0.8%	0.4%	1.1%	0.5%
16L	16LD1B3	0.2%	0.2%	0.1%	0.3%	0.1%
16L	16LD1B4	0.2%	0.2%	0.1%	0.3%	0.1%
16L	16LD1C	0.0%	0.0%	0.0%	0.9%	0.4%
16L	16LD1C1	0.0%	0.0%	0.0%	0.6%	0.3%
16L	16LD1C2	0.0%	0.0%	0.0%	0.6%	0.3%
16L	16LD1C3	0.0%	0.0%	0.0%	0.1%	0.1%
16L	16LD1C4	0.0%	0.0%	0.0%	0.1%	0.1%
16L	16LD1D	0.4%	0.3%	0.2%	0.0%	0.0%
16L	16LD1D1	0.2%	0.2%	0.1%	0.0%	0.0%
16L	16LD1D2	0.2%	0.2%	0.1%	0.0%	0.0%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16L	16LD1D3	0.1%	0.1%	0.0%	0.0%	0.0%
16L	16LD1D4	0.1%	0.1%	0.0%	0.0%	0.0%
16L	16LD2A	0.9%	0.8%	0.4%	0.0%	0.0%
16L	16LD2A1	0.6%	0.5%	0.3%	0.0%	0.0%
16L	16LD2A2	0.6%	0.5%	0.3%	0.0%	0.0%
16L	16LD2A3	0.2%	0.1%	0.1%	0.0%	0.0%
16L	16LD2A4	0.2%	0.1%	0.1%	0.0%	0.0%
16L	16LD2B	6.0%	5.4%	2.6%	0.0%	0.0%
16L	16LD2B1	3.8%	3.4%	1.7%	0.0%	0.0%
16L	16LD2B2	3.8%	3.4%	1.7%	0.0%	0.0%
16L	16LD2B3	1.0%	0.9%	0.4%	0.0%	0.0%
16L	16LD2B4	1.0%	0.9%	0.4%	0.0%	0.0%
16L	16LD3A	2.8%	2.5%	1.2%	0.0%	0.0%
16L	16LD3A1	1.8%	1.6%	0.8%	0.0%	0.0%
16L	16LD3A2	1.8%	1.6%	0.8%	0.0%	0.0%
16L	16LD3A3	0.5%	0.4%	0.2%	0.0%	0.0%
16L	16LD3A4	0.5%	0.4%	0.2%	0.0%	0.0%
16L	16LD3B	1.1%	1.0%	0.5%	0.0%	0.0%
16L	16LD3B1	0.7%	0.6%	0.3%	0.0%	0.0%
16L	16LD3B2	0.7%	0.6%	0.3%	0.0%	0.0%
16L	16LD3B3	0.2%	0.2%	0.1%	0.0%	0.0%
16L	16LD3B4	0.2%	0.2%	0.1%	0.0%	0.0%
16L	16LD4A	0.0%	0.0%	0.0%	4.4%	2.2%
16L	16LD4A1	0.0%	0.0%	0.0%	2.8%	1.4%
16L	16LD4A2	0.0%	0.0%	0.0%	2.8%	1.4%
16L	16LD4A3	0.0%	0.0%	0.0%	0.7%	0.4%
16L	16LD4A4	0.0%	0.0%	0.0%	0.7%	0.4%
16L	16LD4B	0.0%	0.0%	0.0%	4.4%	2.2%
16L	16LD4B1	0.0%	0.0%	0.0%	2.8%	1.4%
16L	16LD4B2	0.0%	0.0%	0.0%	2.8%	1.4%
16L	16LD4B3	0.0%	0.0%	0.0%	0.7%	0.4%
16L	16LD4B4	0.0%	0.0%	0.0%	0.7%	0.4%
16L	16LD4C	0.0%	0.0%	0.0%	0.9%	0.4%
16L	16LD4C1	0.0%	0.0%	0.0%	0.6%	0.3%
16L	16LD4C2	0.0%	0.0%	0.0%	0.6%	0.3%
16L	16LD4C3	0.0%	0.0%	0.0%	0.1%	0.1%
16L	16LD4C4	0.0%	0.0%	0.0%	0.1%	0.1%
16L	16LD5A	0.0%	0.0%	0.0%	1.7%	0.9%
16L	16LD5A1	0.0%	0.0%	0.0%	1.1%	0.5%
16L	16LD5A2	0.0%	0.0%	0.0%	1.1%	0.5%
16L	16LD5A3	0.0%	0.0%	0.0%	0.3%	0.1%
16L	16LD5A4	0.0%	0.0%	0.0%	0.3%	0.1%
16L	16LD5B	0.0%	0.0%	0.0%	1.7%	0.9%
16L	16LD5B1	0.0%	0.0%	0.0%	1.1%	0.5%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16L	16LD5B2	0.0%	0.0%	0.0%	1.1%	0.5%
16L	16LD5B3	0.0%	0.0%	0.0%	0.3%	0.1%
16L	16LD5B4	0.0%	0.0%	0.0%	0.3%	0.1%
16L	16LD5C	0.0%	0.0%	0.0%	1.7%	0.9%
16L	16LD5C1	0.0%	0.0%	0.0%	1.1%	0.5%
16L	16LD5C2	0.0%	0.0%	0.0%	1.1%	0.5%
16L	16LD5C3	0.0%	0.0%	0.0%	0.3%	0.1%
16L	16LD5C4	0.0%	0.0%	0.0%	0.3%	0.1%
16R	16RD1A	0.0%	0.0%	1.7%	0.0%	0.0%
16R	16RD1A1	0.0%	0.0%	1.1%	0.0%	0.0%
16R	16RD1A2	0.0%	0.0%	1.1%	0.0%	0.0%
16R	16RD1A3	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD1A4	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD1B	0.0%	0.0%	0.4%	0.0%	0.0%
16R	16RD1B1	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD1B2	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD1B3	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD1B4	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD1C	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD1C1	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD1C2	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD1C3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD1C4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD1D	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD1D1	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD1D2	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD1D3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD1D4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD2A	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD2A1	0.0%	0.0%	0.2%	0.0%	0.0%
16R	16RD2A2	0.0%	0.0%	0.2%	0.0%	0.0%
16R	16RD2A3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD2A4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD2B	0.0%	0.0%	1.7%	0.0%	0.0%
16R	16RD2B1	0.0%	0.0%	1.1%	0.0%	0.0%
16R	16RD2B2	0.0%	0.0%	1.1%	0.0%	0.0%
16R	16RD2B3	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD2B4	0.0%	0.0%	0.3%	0.0%	0.0%
16R	16RD3A	0.0%	0.0%	0.8%	0.0%	0.0%
16R	16RD3A1	0.0%	0.0%	0.5%	0.0%	0.0%
16R	16RD3A2	0.0%	0.0%	0.5%	0.0%	0.0%
16R	16RD3A3	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD3A4	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD3B	0.0%	0.0%	0.3%	0.0%	0.0%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
16R	16RD3B1	0.0%	0.0%	0.2%	0.0%	0.0%
16R	16RD3B2	0.0%	0.0%	0.2%	0.0%	0.0%
16R	16RD3B3	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD3B4	0.0%	0.0%	0.1%	0.0%	0.0%
16R	16RD4A	0.0%	0.0%	0.0%	0.1%	0.0%
16R	16RD4A1	0.0%	0.0%	0.0%	0.1%	0.0%
16R	16RD4A2	0.0%	0.0%	0.0%	0.1%	0.0%
16R	16RD4A3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4A4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4B	0.0%	0.0%	0.0%	0.1%	0.0%
16R	16RD4B1	0.0%	0.0%	0.0%	0.1%	0.0%
16R	16RD4B2	0.0%	0.0%	0.0%	0.1%	0.0%
16R	16RD4B3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4B4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4C	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4C1	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4C2	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4C3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD4C4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5A	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5A1	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5A2	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5A3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5A4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5B	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5B1	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5B2	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5B3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5B4	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5C	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5C1	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5C2	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5C3	0.0%	0.0%	0.0%	0.0%	0.0%
16R	16RD5C4	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CD1	1.2%	1.3%	2.1%	0.0%	0.0%
34C	34CD11	0.7%	0.9%	1.4%	0.0%	0.0%
34C	34CD12	0.7%	0.9%	1.4%	0.0%	0.0%
34C	34CD13	0.2%	0.2%	0.4%	0.0%	0.0%
34C	34CD14	0.2%	0.2%	0.4%	0.0%	0.0%
34C	34CD2A	0.6%	0.7%	1.1%	0.0%	0.0%
34C	34CD2A1	0.4%	0.4%	0.7%	0.0%	0.0%
34C	34CD2A2	0.4%	0.4%	0.7%	0.0%	0.0%
34C	34CD2A3	0.1%	0.1%	0.2%	0.0%	0.0%
34C	34CD2A4	0.1%	0.1%	0.2%	0.0%	0.0%

Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34C	34CD2B	0.4%	0.4%	0.6%	0.0%	0.0%
34C	34CD2B1	0.2%	0.3%	0.4%	0.0%	0.0%
34C	34CD2B2	0.2%	0.3%	0.4%	0.0%	0.0%
34C	34CD2B3	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD2B4	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD2C	0.4%	0.4%	0.6%	0.0%	0.0%
34C	34CD2C1	0.2%	0.3%	0.4%	0.0%	0.0%
34C	34CD2C2	0.2%	0.3%	0.4%	0.0%	0.0%
34C	34CD2C3	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD2C4	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD2D	0.5%	0.5%	0.9%	0.0%	0.0%
34C	34CD2D1	0.3%	0.3%	0.5%	0.0%	0.0%
34C	34CD2D2	0.3%	0.3%	0.5%	0.0%	0.0%
34C	34CD2D3	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD2D4	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD3A	1.2%	1.3%	2.1%	0.0%	0.0%
34C	34CD3A1	0.7%	0.9%	1.4%	0.0%	0.0%
34C	34CD3A2	0.7%	0.9%	1.4%	0.0%	0.0%
34C	34CD3A3	0.2%	0.2%	0.4%	0.0%	0.0%
34C	34CD3A4	0.2%	0.2%	0.4%	0.0%	0.0%
34C	34CD3B	0.7%	0.8%	1.3%	0.0%	0.0%
34C	34CD3B1	0.4%	0.5%	0.8%	0.0%	0.0%
34C	34CD3B2	0.4%	0.5%	0.8%	0.0%	0.0%
34C	34CD3B3	0.1%	0.1%	0.2%	0.0%	0.0%
34C	34CD3B4	0.1%	0.1%	0.2%	0.0%	0.0%
34C	34CD3C	0.4%	0.4%	0.6%	0.0%	0.0%
34C	34CD3C1	0.2%	0.3%	0.4%	0.0%	0.0%
34C	34CD3C2	0.2%	0.3%	0.4%	0.0%	0.0%
34C	34CD3C3	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD3C4	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD3D	0.3%	0.3%	0.5%	0.0%	0.0%
34C	34CD3D1	0.2%	0.2%	0.3%	0.0%	0.0%
34C	34CD3D2	0.2%	0.2%	0.3%	0.0%	0.0%
34C	34CD3D3	0.0%	0.1%	0.1%	0.0%	0.0%
34C	34CD3D4	0.0%	0.1%	0.1%	0.0%	0.0%
34C	34CD3E	0.3%	0.3%	0.5%	0.0%	0.0%
34C	34CD3E1	0.2%	0.2%	0.3%	0.0%	0.0%
34C	34CD3E2	0.2%	0.2%	0.3%	0.0%	0.0%
34C	34CD3E3	0.0%	0.1%	0.1%	0.0%	0.0%
34C	34CD3E4	0.0%	0.1%	0.1%	0.0%	0.0%
34C	34CD3F	0.1%	0.1%	0.2%	0.0%	0.0%
34C	34CD3F1	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD3F2	0.1%	0.1%	0.1%	0.0%	0.0%
34C	34CD3F3	0.0%	0.0%	0.0%	0.0%	0.0%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34C	34CD3F4	0.0%	0.0%	0.0%	0.0%	0.0%
34C	34CD4A	0.0%	0.0%	0.0%	1.3%	1.7%
34C	34CD4A1	0.0%	0.0%	0.0%	0.8%	1.1%
34C	34CD4A2	0.0%	0.0%	0.0%	0.8%	1.1%
34C	34CD4A3	0.0%	0.0%	0.0%	0.2%	0.3%
34C	34CD4A4	0.0%	0.0%	0.0%	0.2%	0.3%
34C	34CD4B	0.0%	0.0%	0.0%	1.0%	1.3%
34C	34CD4B1	0.0%	0.0%	0.0%	0.6%	0.8%
34C	34CD4B2	0.0%	0.0%	0.0%	0.6%	0.8%
34C	34CD4B3	0.0%	0.0%	0.0%	0.2%	0.2%
34C	34CD4B4	0.0%	0.0%	0.0%	0.2%	0.2%
34C	34CD4C	0.0%	0.0%	0.0%	0.3%	0.4%
34C	34CD4C1	0.0%	0.0%	0.0%	0.2%	0.3%
34C	34CD4C2	0.0%	0.0%	0.0%	0.2%	0.3%
34C	34CD4C3	0.0%	0.0%	0.0%	0.1%	0.1%
34C	34CD4C4	0.0%	0.0%	0.0%	0.1%	0.1%
34C	34CD5A	0.0%	0.0%	0.0%	2.4%	3.0%
34C	34CD5A1	0.0%	0.0%	0.0%	1.5%	1.9%
34C	34CD5A2	0.0%	0.0%	0.0%	1.5%	1.9%
34C	34CD5A3	0.0%	0.0%	0.0%	0.4%	0.5%
34C	34CD5A4	0.0%	0.0%	0.0%	0.4%	0.5%
34C	34CD5B	0.0%	0.0%	0.0%	1.7%	2.1%
34C	34CD5B1	0.0%	0.0%	0.0%	1.1%	1.4%
34C	34CD5B2	0.0%	0.0%	0.0%	1.1%	1.4%
34C	34CD5B3	0.0%	0.0%	0.0%	0.3%	0.3%
34C	34CD5B4	0.0%	0.0%	0.0%	0.3%	0.3%
34L	34LD1	0.0%	0.0%	0.3%	0.0%	0.0%
34L	34LD11	0.0%	0.0%	0.2%	0.0%	0.0%
34L	34LD12	0.0%	0.0%	0.2%	0.0%	0.0%
34L	34LD13	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD14	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2A	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2A1	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2A2	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2A3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2A4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2B	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2B1	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2B2	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2B3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2B4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2C	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2C1	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2C2	0.0%	0.0%	0.1%	0.0%	0.0%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34L	34LD2C3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2C4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2D	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2D1	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2D2	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD2D3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD2D4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3A	0.0%	0.0%	0.3%	0.0%	0.0%
34L	34LD3A1	0.0%	0.0%	0.2%	0.0%	0.0%
34L	34LD3A2	0.0%	0.0%	0.2%	0.0%	0.0%
34L	34LD3A3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3A4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3B	0.0%	0.0%	0.2%	0.0%	0.0%
34L	34LD3B1	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3B2	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3B3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3B4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3C	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3C1	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3C2	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3C3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3C4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3D	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3D1	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3D2	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3D3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3D4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3E	0.0%	0.0%	0.1%	0.0%	0.0%
34L	34LD3E1	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3E2	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3E3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3E4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3F	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3F1	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3F2	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3F3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD3F4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4A	0.0%	0.0%	0.0%	0.2%	0.0%
34L	34LD4A1	0.0%	0.0%	0.0%	0.1%	0.0%
34L	34LD4A2	0.0%	0.0%	0.0%	0.1%	0.0%
34L	34LD4A3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4A4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4B	0.0%	0.0%	0.0%	0.1%	0.0%
34L	34LD4B1	0.0%	0.0%	0.0%	0.1%	0.0%

Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34L	34LD4B2	0.0%	0.0%	0.0%	0.1%	0.0%
34L	34LD4B3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4B4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4C	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4C1	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4C2	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4C3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD4C4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD5A	0.0%	0.0%	0.0%	0.3%	0.0%
34L	34LD5A1	0.0%	0.0%	0.0%	0.2%	0.0%
34L	34LD5A2	0.0%	0.0%	0.0%	0.2%	0.0%
34L	34LD5A3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD5A4	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD5B	0.0%	0.0%	0.0%	0.2%	0.0%
34L	34LD5B1	0.0%	0.0%	0.0%	0.1%	0.0%
34L	34LD5B2	0.0%	0.0%	0.0%	0.1%	0.0%
34L	34LD5B3	0.0%	0.0%	0.0%	0.0%	0.0%
34L	34LD5B4	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RD1	1.5%	1.3%	0.4%	0.0%	0.0%
34R	34RD11	0.9%	0.8%	0.2%	0.0%	0.0%
34R	34RD12	0.9%	0.8%	0.2%	0.0%	0.0%
34R	34RD13	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD14	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD2A	0.7%	0.6%	0.2%	0.0%	0.0%
34R	34RD2A1	0.5%	0.4%	0.1%	0.0%	0.0%
34R	34RD2A2	0.5%	0.4%	0.1%	0.0%	0.0%
34R	34RD2A3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2A4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2B	0.4%	0.4%	0.1%	0.0%	0.0%
34R	34RD2B1	0.3%	0.2%	0.1%	0.0%	0.0%
34R	34RD2B2	0.3%	0.2%	0.1%	0.0%	0.0%
34R	34RD2B3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2B4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2C	0.4%	0.4%	0.1%	0.0%	0.0%
34R	34RD2C1	0.3%	0.2%	0.1%	0.0%	0.0%
34R	34RD2C2	0.3%	0.2%	0.1%	0.0%	0.0%
34R	34RD2C3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2C4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2D	0.6%	0.5%	0.2%	0.0%	0.0%
34R	34RD2D1	0.4%	0.3%	0.1%	0.0%	0.0%
34R	34RD2D2	0.4%	0.3%	0.1%	0.0%	0.0%
34R	34RD2D3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD2D4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3A	1.5%	1.3%	0.4%	0.0%	0.0%

**Table G-4, Continued
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34R	34RD3A1	0.9%	0.8%	0.2%	0.0%	0.0%
34R	34RD3A2	0.9%	0.8%	0.2%	0.0%	0.0%
34R	34RD3A3	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD3A4	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD3B	0.9%	0.8%	0.2%	0.0%	0.0%
34R	34RD3B1	0.6%	0.5%	0.1%	0.0%	0.0%
34R	34RD3B2	0.6%	0.5%	0.1%	0.0%	0.0%
34R	34RD3B3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3B4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3C	0.4%	0.4%	0.1%	0.0%	0.0%
34R	34RD3C1	0.3%	0.2%	0.1%	0.0%	0.0%
34R	34RD3C2	0.3%	0.2%	0.1%	0.0%	0.0%
34R	34RD3C3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3C4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3D	0.4%	0.3%	0.1%	0.0%	0.0%
34R	34RD3D1	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD3D2	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD3D3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3D4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3E	0.4%	0.3%	0.1%	0.0%	0.0%
34R	34RD3E1	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD3E2	0.2%	0.2%	0.1%	0.0%	0.0%
34R	34RD3E3	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3E4	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3F	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3F1	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3F2	0.1%	0.1%	0.0%	0.0%	0.0%
34R	34RD3F3	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RD3F4	0.0%	0.0%	0.0%	0.0%	0.0%
34R	34RD4A	0.0%	0.0%	0.0%	1.3%	3.0%
34R	34RD4A1	0.0%	0.0%	0.0%	0.8%	1.9%
34R	34RD4A2	0.0%	0.0%	0.0%	0.8%	1.9%
34R	34RD4A3	0.0%	0.0%	0.0%	0.2%	0.5%
34R	34RD4A4	0.0%	0.0%	0.0%	0.2%	0.5%
34R	34RD4B	0.0%	0.0%	0.0%	0.9%	2.3%
34R	34RD4B1	0.0%	0.0%	0.0%	0.6%	1.4%
34R	34RD4B2	0.0%	0.0%	0.0%	0.6%	1.4%
34R	34RD4B3	0.0%	0.0%	0.0%	0.2%	0.4%
34R	34RD4B4	0.0%	0.0%	0.0%	0.2%	0.4%
34R	34RD4C	0.0%	0.0%	0.0%	0.3%	0.8%
34R	34RD4C1	0.0%	0.0%	0.0%	0.2%	0.5%
34R	34RD4C2	0.0%	0.0%	0.0%	0.2%	0.5%
34R	34RD4C3	0.0%	0.0%	0.0%	0.1%	0.1%
34R	34RD4C4	0.0%	0.0%	0.0%	0.1%	0.1%

**Table G-4
INM DEPARTURE FLIGHT TRACKS – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

RUNWAY	FLIGHT TRACK	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBOPROPS	GA PROPS
34R	34RD5A	0.0%	0.0%	0.0%	2.2%	5.3%
34R	34RD5A1	0.0%	0.0%	0.0%	1.4%	3.4%
34R	34RD5A2	0.0%	0.0%	0.0%	1.4%	3.4%
34R	34RD5A3	0.0%	0.0%	0.0%	0.4%	0.9%
34R	34RD5A4	0.0%	0.0%	0.0%	0.4%	0.9%
34R	34RD5B	0.0%	0.0%	0.0%	1.6%	3.8%
34R	34RD5B1	0.0%	0.0%	0.0%	1.0%	2.4%
34R	34RD5B2	0.0%	0.0%	0.0%	1.0%	2.4%
34R	34RD5B3	0.0%	0.0%	0.0%	0.3%	0.6%
34R	34RD5B4	0.0%	0.0%	0.0%	0.3%	0.6%

Source: Seattle-Tacoma International Airport ANOMS Data, 2009; Landrum & Brown, 2011.

Aircraft Weight and Trip Length

Aircraft weight upon departure is a factor in the dispersion of noise because it impacts the rate at which an aircraft is able to climb. Generally, heavier aircraft have a slower rate of climb and a wider dispersion of noise along their flight routes. Where specific aircraft weights are unknown, the INM uses the distance flown to the first stop as a surrogate for the weight, by assuming that the weight has a direct relationship with the fuel load necessary to reach the first destination. The INM groups trip lengths into seven stage categories and assigns standard aircraft weights to each stage category. These categories are:

<u>Stage Category</u>	<u>Stage Length</u>
1	0-500 nautical miles
2	500-1,000 nautical miles
3	1,000-1,500 nautical miles
4	1,500-2,500 nautical miles
5	2,500-3,500 nautical miles
6	3,500-4,500 nautical miles
7	4,500+ nautical miles

The departure trip lengths in 2021 are expected to remain similar to the Existing (2011) and Future (2016) Baseline conditions. The departure stage length percentages modeled for the Future (2021) NEM/NCP are shown in **Table G-5, Departure Trip Length Distribution - Future (2021) NEM/NCP**.

**Table G-5
DEPARTURE TRIP LENGTH DISTRIBUTION – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport**

STAGE LENGTH	LARGE JETS	REGIONAL JETS	BUSINESS JETS	TURBO-PROPS	GA PROPS	TOTAL
1	3.2%	45.0%	100.0%	100.0%	100.0%	32.0%
2	40.9%	55.0%	0.0%	0.0%	0.0%	30.2%
3	24.5%	0.0%	0.0%	0.0%	0.0%	16.6%
4	26.3%	0.0%	0.0%	0.0%	0.0%	17.8%
5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6	3.4%	0.0%	0.0%	0.0%	0.0%	2.3%
7	1.6%	0.0%	0.0%	0.0%	0.0%	1.1%

Source: Landrum & Brown, 2011.

Approximately 32.0 percent of all departures were modeled with a stage length of one (0-500 nautical miles). Typical destinations within these distances from Sea-Tac Airport include Boise, Idaho; Portland, Oregon; and Vancouver, British Columbia. Another 30.2 percent of all departures were modeled with a stage length of two (500-1,000 nautical miles). Typical destinations within these distances from Sea-Tac Airport include Denver, Colorado; Las Vegas, Nevada; and Los Angeles, California. Approximately 16.6 percent of all departures were modeled with a stage length of three (1,000-1,500 nautical miles). Typical destinations within these distances from Sea-Tac Airport include Chicago, Illinois; Dallas, Texas; and Minneapolis-St. Paul, Minnesota. Approximately 17.8 percent of all departures were modeled with a stage length of four (1,500-2,500 nautical miles). Typical destinations within these distances from Sea-Tac Airport include Atlanta, Georgia; New York City; and Toronto, Ontario. The remaining 3.4 percent of departures operated to destinations with a stage length of six or greater (3,500 or more nautical miles), which include destinations to Asia and Europe.

Ground Run-Up Noise

Engine run-ups are typically performed in two locations on the airfield at Sea-Tac Airport, on Taxiway B between Taxiways D and E, and on the hold pad east of the end of Runway 34R. According to data collected by the Port of Seattle (Port) on run-up activity, approximately 10-11 run-ups are conducted per week at Sea-Tac Airport, including approximately 8-9 per week during daytime hours (7:00 a.m. to 9:59 p.m.) and 1-2 per week during nighttime hours (10:00 p.m. to 6:59 a.m.) Information on the number and types of run-ups that were modeled for the Future (2021) NEM/NCP noise exposure contours is shown in **Table G-6, Ground Run-Up Activity – Future (2021) NEM/NCP**.

Table G-6
GROUND RUN-UP ACTIVITY – FUTURE (2021) NEM/NCP
Seattle-Tacoma International Airport

INM ID	RUN-UP LOCATION	AIRCRAFT HEADING (DEGREES)	AVERAGE WEEKLY RUN-UPS		AVERAGE DURATION (MINUTES)	POWER (THRUST) SETTING
			DAYTIME	NIGHTTIME		
737700	Taxiway B	340	2.11	0.38	10	24,000 lbs.
737700	34R Hold Pad	160	3.87	0.56	10	24,000 lbs.
767300	Taxiway B	340	0.09	0.02	10	60,000 lbs.
767300	34R Hold Pad	160	0.19	0.03	10	60,000 lbs.
CL601	Taxiway B	340	0.19	0.04	10	9,220 lbs.
CL601	34R Hold Pad	160	0.22	0.03	10	9,220 lbs.
DHC830	Taxiway B	340	0.65	0.12	10	100 percent
DHC830	34R Hold Pad	160	1.36	0.20	10	100 percent
TOTAL			8.68	1.38	n/a	n/a

Note: Daytime = 7:00 a.m. to 9:59 p.m., Nighttime = 10:00 p.m. to 6:59 a.m.
Source: Port of Seattle, 2011

G.2 NOISE MODELING RESULTS

The number of operations, runway use, flight track, and trip length data presented in the previous sections are used as input to the INM computer model for the calculation of noise exposure in the airport environs. **Exhibit G-1, Future (2021) NEM\NCP Noise Exposure Contour**, reflects the average annual noise exposure pattern expected at Sea-Tac Airport for the Future (2021) NEM/NCP conditions. **Table G-7, Areas Within Future (2021) NEM/NCP – Noise Exposure Contour**, summarizes the area within each noise contour level within airport property and the surrounding jurisdictions.

The noise contour does not represent the noise levels present on any specific day, but, rather, represents the energy-average of all 365 days of operation during the year. The noise contour pattern extends from the airport along each extended runway centerline, reflective of the flight tracks used by all aircraft. The relative distance of the contour from the airport along each route is a function of the frequency of use of each runway end for total arrivals and departures, as well as its use at night (10:00 p.m. to 6:59 a.m.), and the type of aircraft assigned to each runway and flight route.

The size and shape of the noise exposure contours for Sea-Tac Airport are primarily a function of the combination of flight tracks and runway use. Wind direction is a primary factor in determining runway use. Sea-Tac Airport is expected to continue to operate in south flow approximately 65 percent of the time, and in north flow approximately 35 percent of the time. The Future (2021) NEM/NCP noise exposure contours are slightly longer and wider to the south of Sea-Tac Airport, which is

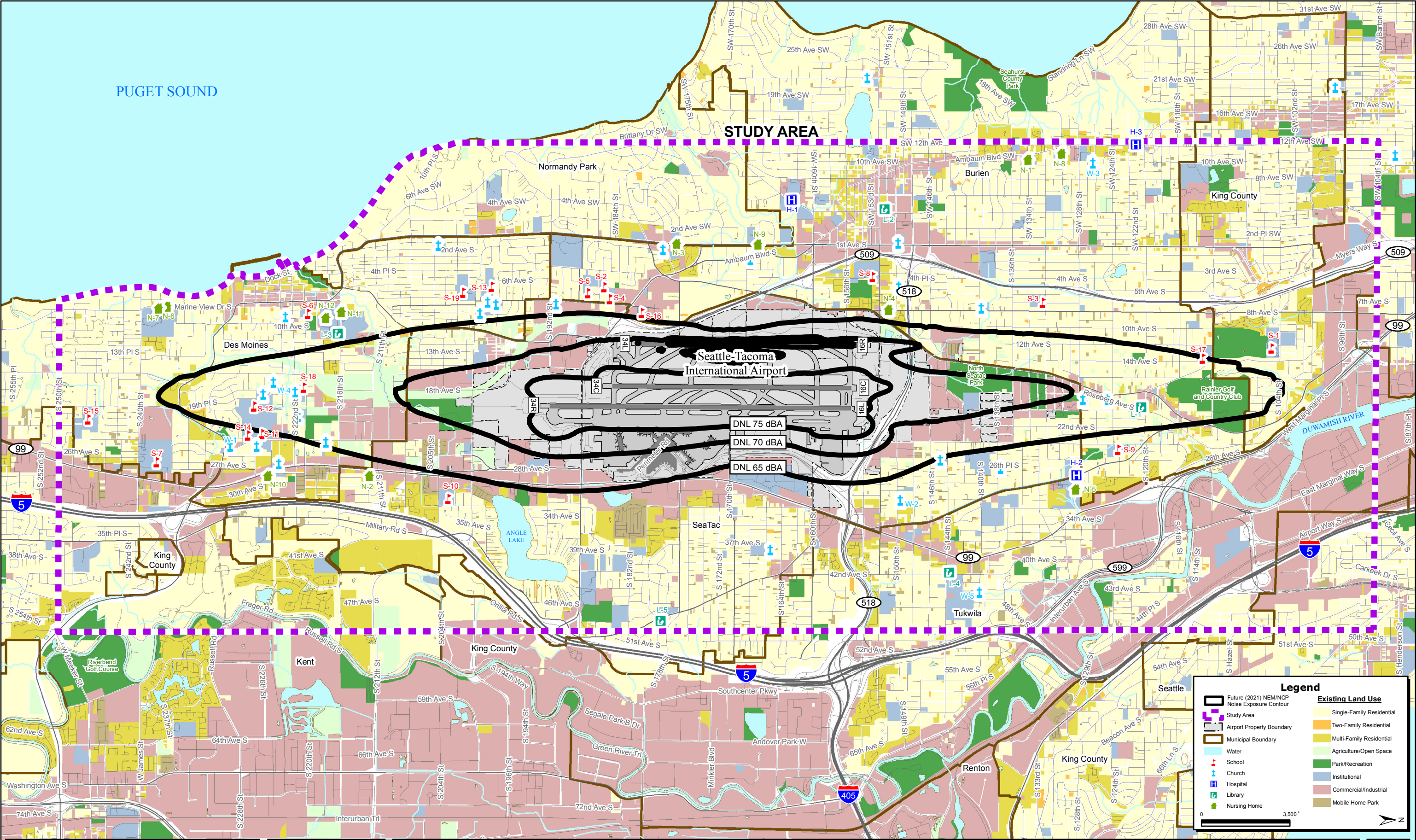
indicative of the greater number of departures to south. The noise exposure contours are slightly shorter and thinner to the north of Sea-Tac Airport, which is indicative of the greater number of arrivals from the north.

Due to the minimal spacing between the three parallel runways, the noise exposure pattern appears as one contiguous shape ending in single points to the north and south of the Airport, rather than three distinct shapes, as would be the case if the runways had greater separation.

To the south of Sea-Tac Airport, the 65 DNL of the Future (2021) NEM/NCP noise exposure contour extends approximately 2.9 miles beyond the south end of Runway 16L/34R, approximately 3.3 miles beyond the south end of Runway 16C/34C and approximately 2.1 miles beyond the south end of Runway 16R/34L. This area comprises a mix of single-family residential, multi-family residential, commercial, and industrial land uses.

To the north of Sea-Tac Airport, the 65 DNL of the Future (2021) NEM/NCP noise exposure contour extends approximately 3.1 miles beyond the north end of Runway 16L/34R, approximately 3.2 miles beyond the north end of Runway 16C/34C, and approximately 2.2 miles beyond the north end of Runway 16R/34L. Like the area to the south of Sea-Tac Airport, the area to the north within the 65 DNL of the Future (2021) NEM/NCP noise exposure contour is comprised of a mix of single-family residential, multi-family residential, commercial, and industrial land uses.

The 65 DNL of the Future (2021) NEM/NCP noise exposure contour is completely contained within the current Noise Remedy Boundary that was established in the 1985 NCP.



**Table G-7
AREA WITHIN FUTURE (2021) NEM/NCP – NOISE EXPOSURE CONTOUR
(IN SQUARE MILES)
Seattle-Tacoma International Airport**

CONTOUR RANGE	FUTURE (2021) NEM/NCP
AIRPORT PROPERTY	
65-70 DNL	0.7
70-75 DNL	1.3
75 + DNL	1.1
65 + DNL	3.1
BURIEN	
65-70 DNL	1.0
70-75 DNL	0.0
75 + DNL	0.0
65 + DNL	1.0
DES MOINES	
65-70 DNL	1.1
70-75 DNL	0.0
75 + DNL	0.0
65 + DNL	1.1
SEATAC	
65-70 DNL	1.5
70-75 DNL	0.6
75 + DNL	0.0
65 + DNL	2.1
KING COUNTY	
65-70 DNL	0.1
70-75 DNL	0.0
75 + DNL	0.0
65 + DNL	0.1
ALL AREAS	
65-70 DNL	4.4
70-75 DNL	1.9
75 + DNL	1.1
65 + DNL	7.4

Contour: SEA213xQSv2Noise-Contours

Source: Landrum & Brown, 2011.

G.2.1 FUTURE (2021) NEM/NCP NOISE CONTOUR INCOMPATIBILITIES

A summary of the housing units, estimated population, and noise-sensitive facilities affected by noise levels exceeding 65 DNL for the Future (2021) NEM/NCP noise exposure contour is provided in **Table G-8, Future (2021) NEM/NCP Land Use Incompatibilities**. There are 4,045 total housing units and an estimated 10,429 residents located within the 65+ DNL of the Future (2021) NEM/NCP noise exposure contour. Of those 4,045 housing units, 2,637 units (2,395 single-family units; 110 two-, three-, or four-family units; and 132 condominiums) have received sound insulation, and therefore are not eligible for additional treatment. Another 991 housing units are potentially eligible for sound insulation in this 2011 NCP update. These include single-, two-, three-, or four-family units and condominiums that were previously eligible but the property owners have not responded to previous offers for sound insulation made by the Port, condominiums that were outside the 1998 70 DNL noise exposure contour, and approximately 661 apartments that were not previously eligible but are recommended to be sound insulated in this 2011 NCP update.¹ The remaining 417 housing units are not eligible for sound insulation because they were constructed after the date of a previously published noise exposure contour or the structure cannot be effectively sound insulated. There are no housing units located within the 70+ DNL of the Future (2021) NEM/NCP noise exposure contour.

There are three schools, Mt. Rainier High School (which has been sound insulated), Southern Heights Elementary (which is scheduled to receive sound insulation provided funding is available), and St. Philomena Primary School (which has been sound insulated) located within the 65+ DNL of the Future (2021) NEM/NCP noise exposure contour. There are seven places of worship, the Apostolic Bible Church, Boulevard Park Presbyterian, First Baptist Church, Highline Seventh Day Adventist Church, Lifepoint Foursquare Church, Primera Iglesia Bautista, and St. Philomena Church; located within the 65+ DNL of the Future (2021) NEM/NCP noise contour (of which St. Philomena Church has been sound insulated). There is one library, Boulevard Public Library, located within the 65+ DNL of the Future (2021) NEM/NCP noise exposure contour. There are no hospitals or nursing homes located within the 65+ DNL of the Future (2021) NEM/NCP noise exposure contour. There are no noise-sensitive public facilities located within the 70+ DNL of the Future (2021) NEM/NCP noise exposure contour.

The land use incompatibilities discussed above represent potential impacts if no changes to land use occur by 2021. It is expected that through the continued implementation of the Noise Remedy Program by the Port, additional housing units will be mitigated or acquired, thus reducing the overall number of impacted, unmitigated properties.

¹ Previously-approved Abatement Measure M-2c recommended sound insulation of condominiums that were within the 70 DNL of the 1998 noise exposure contour from the 2002 Part 150 Study update. Measures M-14 and M-15 from this 2011 NCP update recommend that condominiums and apartments within the modified Noise Remedy Boundary be sound insulated based on the results of a pilot program and the availability of funding.

**Table G-8
FUTURE (2021) NEM/NCP LAND USE INCOMPATIBILITIES
Seattle-Tacoma International Airport**

MITIGATION STATUS / LAND USE	NOISE CONTOUR BAND		
	65 - 70 DNL	70+ DNL	65+ DNL
HOUSING UNITS			
CITY OF BURIEEN			
Sound Insulation Completed			
Single-Family	997	0	997
Two-, Three-, or Four-Family Unit	72	0	72
Condominium	75	0	75
Apartment	0	0	0
Mobile Home	0	0	0
Potentially eligible but not sound insulated			
Single-Family	59	0	59
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	36	0	36
Apartment	215	0	215
Mobile Home	0	0	0
Not Eligible			
Single-Family	45	0	45
Two-, Three-, or Four-Family Unit	4	0	4
Condominium	0	0	0
Apartment	0	0	0
Mobile Home	33	0	33
CITY OF DES MOINES			
Sound Insulation Completed			
Single-Family	607	0	607
Two-, Three-, or Four-Family Unit	26	0	26
Condominium	52	0	52
Apartment	0	0	0
Mobile Home	0	0	0
Potentially eligible but not sound insulated			
Single-Family	35	0	35
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	147	0	147
Apartment	424	0	424
Mobile Home	0	0	0
Not Eligible			
Single-Family	88	0	88
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	25	0	25
Apartment	118	0	118
Mobile Home	5	0	5

**Table G-8, Continued
FUTURE (2021) NEM/NCP LAND USE INCOMPATIBILITIES
Seattle-Tacoma International Airport**

MITIGATION STATUS / LAND USE	NOISE CONTOUR BAND		
	65 - 70 DNL	70+ DNL	65+ DNL
HOUSING UNITS			
CITY OF SEATAC			
Sound Insulation Completed			
Single-Family	661	0	661
Two-, Three-, or Four-Family Unit	10	0	10
Condominium	5	0	5
Apartment	0	0	0
Mobile Home	0	0	0
Potentially eligible but not sound insulated			
Single-Family	47	0	47
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	0	0	0
Apartment	22	0	22
Mobile Home	0	0	0
Not Eligible			
Single-Family	61	0	61
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	0	0	0
Apartment	5	0	5
Mobile Home	31	0	31
KING COUNTY			
Sound Insulation Completed			
Single-Family	130	0	130
Two-, Three-, or Four-Family Unit	2	0	2
Condominium	0	0	0
Apartment	0	0	0
Mobile Home	0	0	0
Potentially eligible but not sound insulated			
Single-Family	6	0	6
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	0	0	0
Apartment	0	0	0
Mobile Home	0	0	0
Not Eligible			
Single-Family	0	0	0
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	0	0	0
Apartment	0	0	0
Mobile Home	2	0	2

**Table G-8, Continued
FUTURE (2021) NEM/NCP LAND USE INCOMPATIBILITIES
Seattle-Tacoma International Airport**

MITIGATION STATUS / LAND USE	NOISE CONTOUR BAND		
	65 - 70 DNL	70+ DNL	65+ DNL
TOTAL - ALL JURISDICTIONS			
Sound Insulation Completed			
Single-Family	2,395	0	2,395
Two-, Three-, or Four-Family Unit	110	0	110
Condominium	132	0	132
Apartment	0	0	0
Mobile Home	0	0	0
Potentially eligible but not sound insulated			
Single-Family	147	0	147
Two-, Three-, or Four-Family Unit	0	0	0
Condominium	183	0	183
Apartment	661	0	661
Mobile Home	0	0	0
Not Eligible			
Single-Family	194	0	194
Two-, Three-, or Four-Family Unit	4	0	4
Condominium	25	0	25
Apartment	123	0	123
Mobile Home	71	0	71
TOTAL HOUSING UNITS	4,045	0	4,045
ESTIMATED POPULATION			
TOTAL ESTIMATED POPULATION	10,429	0	10,429
NOISE-SENSITIVE PUBLIC FACILITIES			
Schools	3	0	3
Churches / Places of Worship	7	0	7
Libraries	1	0	1
Hospitals	0	0	0
Nursing Homes	0	0	0

Notes: Estimated population based on average household size by U.S. Census tract data. Eligibility for mitigation programs will be determined as program implementation moves forward.

Sources: King County Geographic Information System data; Port of Seattle Noise Remedy Program records; U.S. Census Bureau; Landrum & Brown analysis, 2011.

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