

# Airport Noise Management Annual Report 2016

The Airport Noise Management Annual Report is a publication of the Airport Noise Management Office. This report provides an annual summary of Lambert-St. Louis International Airport's operations and noise complaints for 2016. Harris, Inc. provides the data for the Noise Management System.



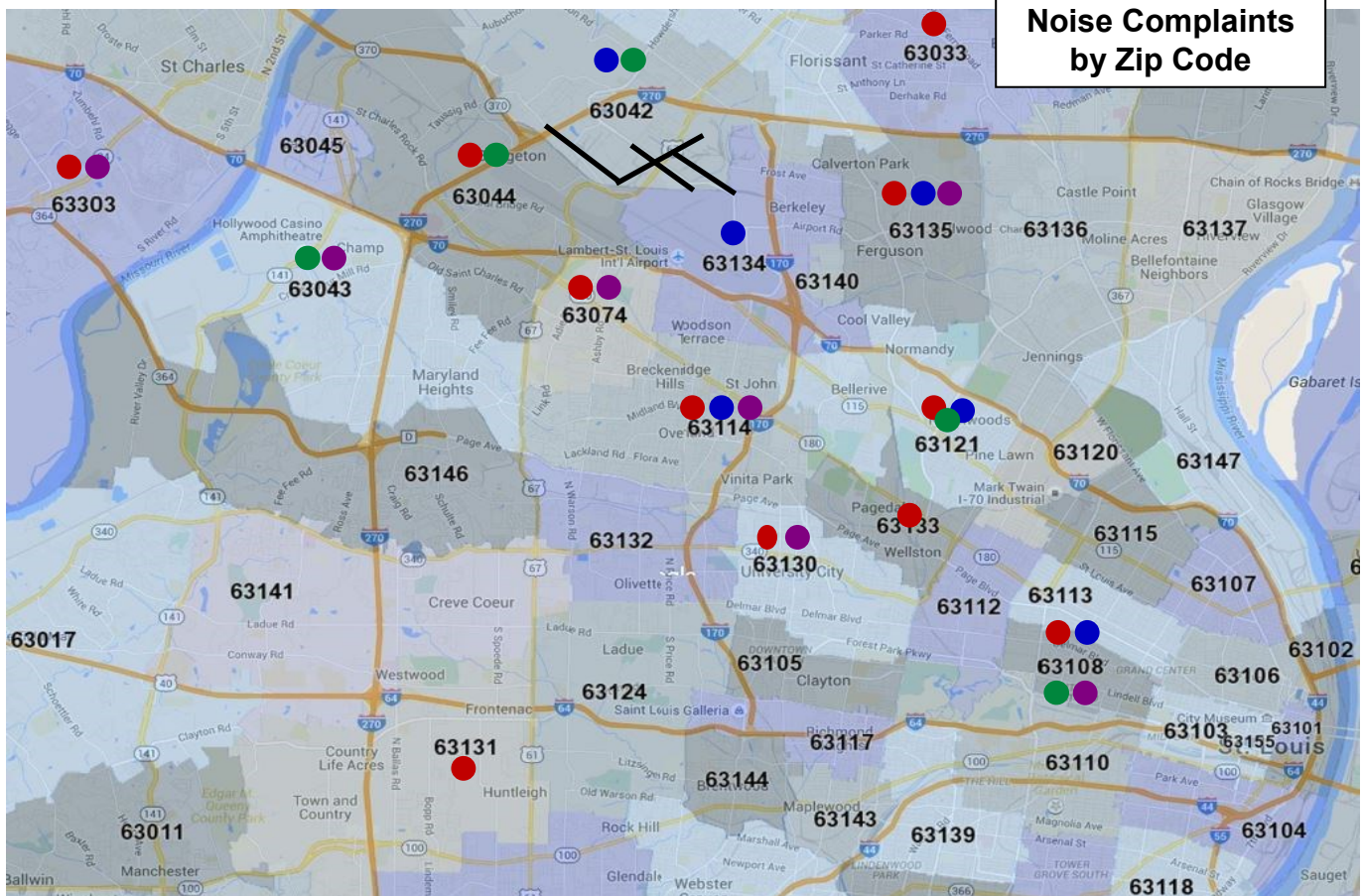
## YEAR 2016

### NOISE COMPLAINTS

There were 150 noise complaints received in 2016 as compared to the 78 noise complaints in 2015, an increase of +92.3%. The 150 complaints were from 17 communities. The complainants stated that the aircraft were too low, too loud, too frequent and woke them or prevented them from sleeping. There were several complaints about military aircraft being too loud and low. There was one complaint of a sonic boom in the Franklin County area.

There were 77 (51.3%) complaints from eleven residents about night time operations (10:00 p.m. to 7:00 a.m.) and 73 (48.7%) complaints from 22 residents about day time operations (7:00 a.m. to 10:00 p.m.). Landings and take-offs (operations) during the day time hours accounted for 87.2% of the operations while 12.8% of the operations occurred during the night time period. Chart below shows number of complaints by zip code by quarter.

**Noise Complaints  
by Zip Code**



#### 1st Quarter

63303 (2)	63114 (2)
63074 (2)	63130 (3)
63131 (1)	63033 (1)
63121 (1)	63044 (1)
63108 (1)	63133 (1)
63135 (2)	

#### 2nd Quarter

63121 (51)	63114 (2)
63108 (6)	63121 (22)
63135 (1)	63042 (2)
63134 (2)	

#### 3rd Quarter

63121 (25)	63042 (2)
63108 (3)	
63143 (2)	

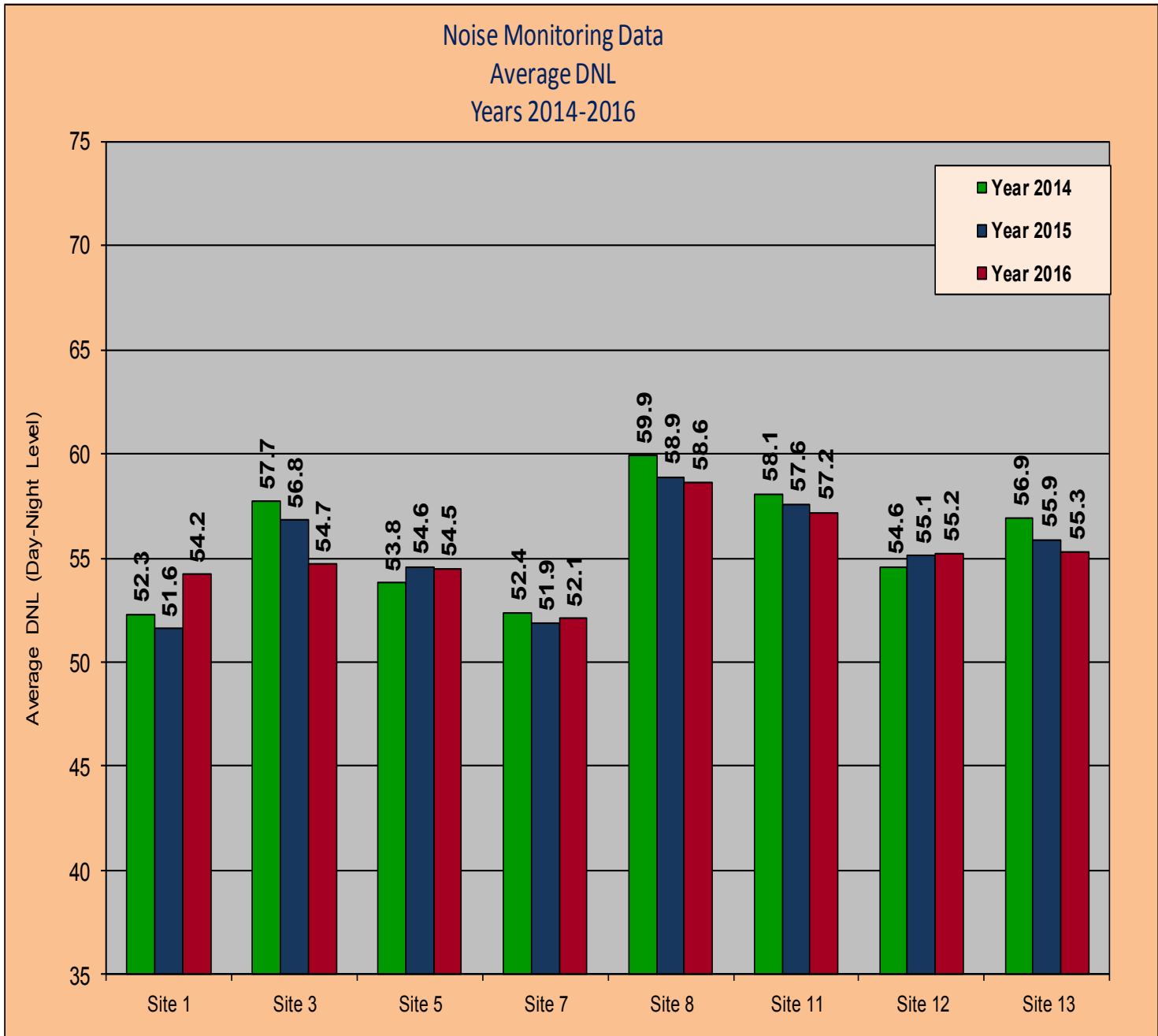
#### 4th Quarter

63376 (1)	63114 (1)
63303 (4)	63108 (2)
63135 (3)	63074 (1)
63130 (1)	63043 (2)

NOISE MONITORING DATA

The Average DNL values for the Years 2014 to 2016 for the eight permanent noise monitors are shown in the chart below. Three permanent noise monitors had increases in DNL levels ranging from +0.1 to +2.6. Five monitors had decreases ranging from -0.1 to -2.1. An increase of 3+ DNL represents a doubling/halving of the noise energy.

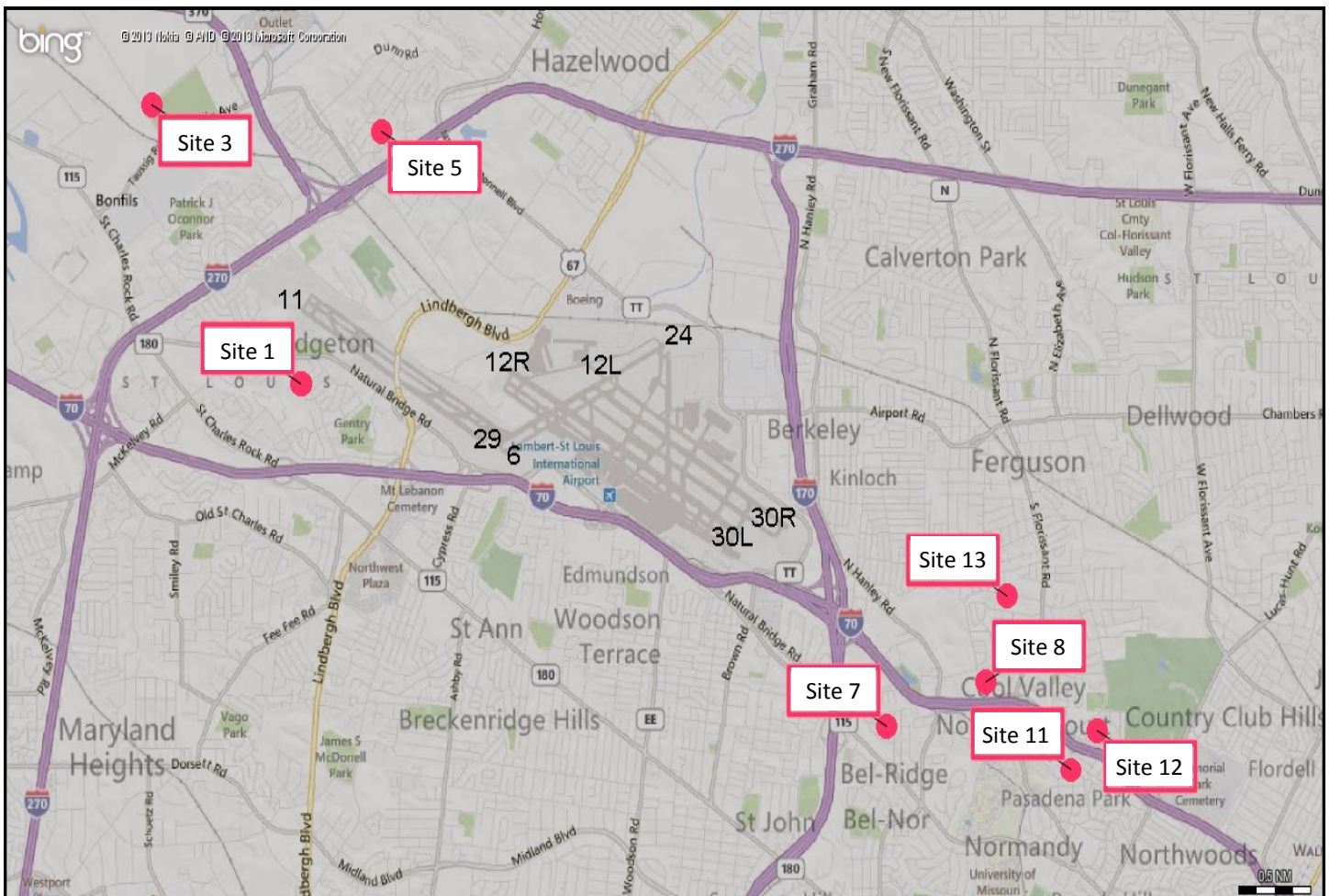
The DNL (Day-Night Level) metric represents noise exposure events over a 24 hour period. The DNL metric approximates the response characteristics of sound to the human ear. The higher the number on the scale, the louder the sound. To account for human sensitivity to noise between the hours of 10 p.m. and 7 a.m., noise events occurring during these hours receive a “penalty” when the DNL is calculated. Each night time event is measured as if ten daytime events occurred.



## NOISE MONITORING LOCATIONS AND RUNWAY IDENTIFICATION

The Permanent Noise Monitoring Sites (NMS) are : Site 1- Benedetta, City of Bridgeton; Site 3- Ferguson Lane, Bridgeton Athletic Complex; Site 5-Villa Rosa & Auriesville, City of Hazelwood; Site 7-Belfore & Loganberry, City of Bel-Ridge; Site 8- Emerling, City of Cool Valley; Site 11-North Hills & Country Club, Village of Pasadena Park; Site 12-Belwood & Kirkland, City of Normandy; and, Site 13-North Hills & Brotherton, City of Ferguson. The runways at Lambert-St. Louis International Airport are: 12R/30L (11,019'x200'), 12L/30R (9,003'x150'), 11/29 (9,001'x150'), and 6/24 (7,607'x150').

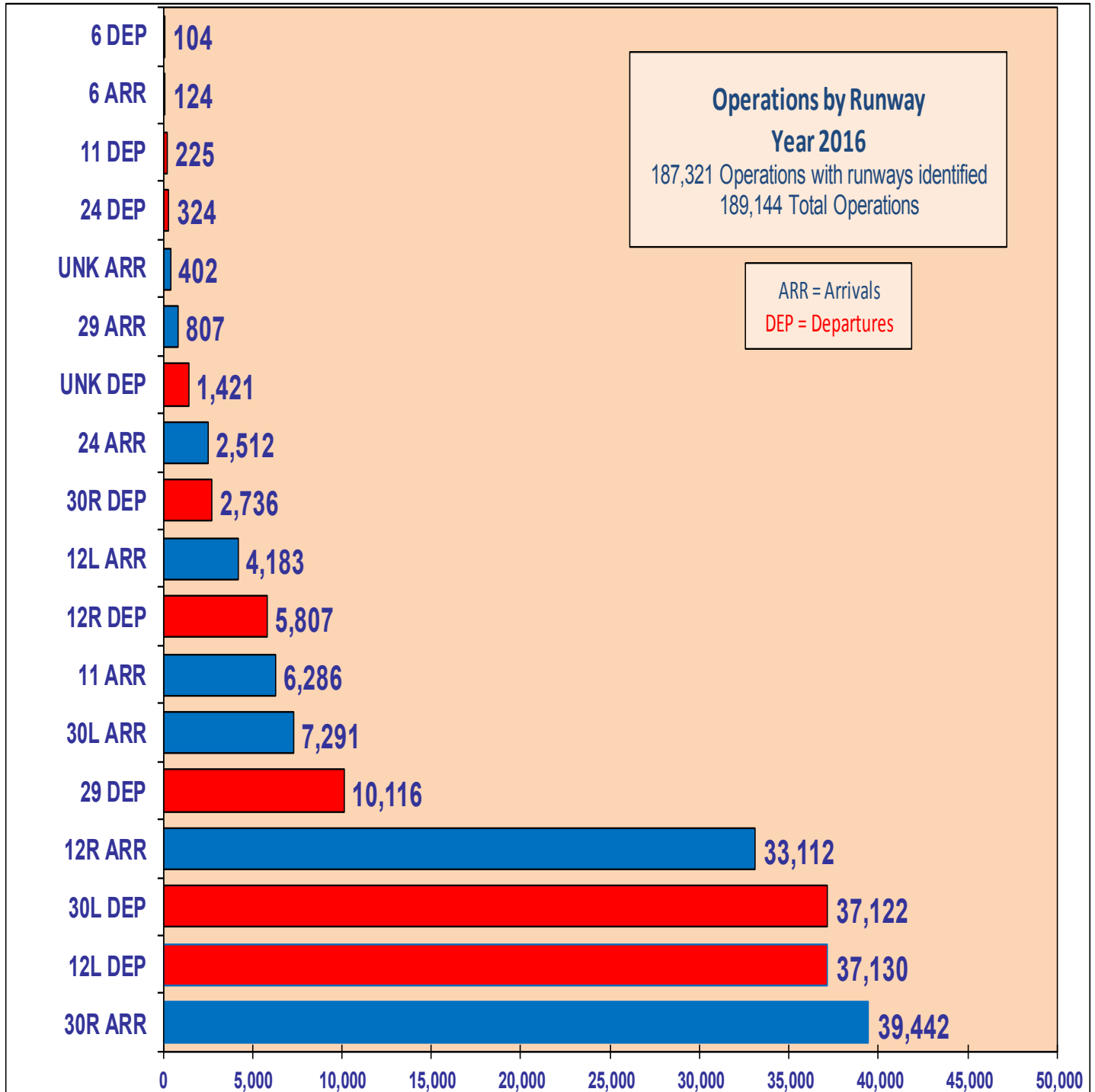
## NOISE MONITORING SITES





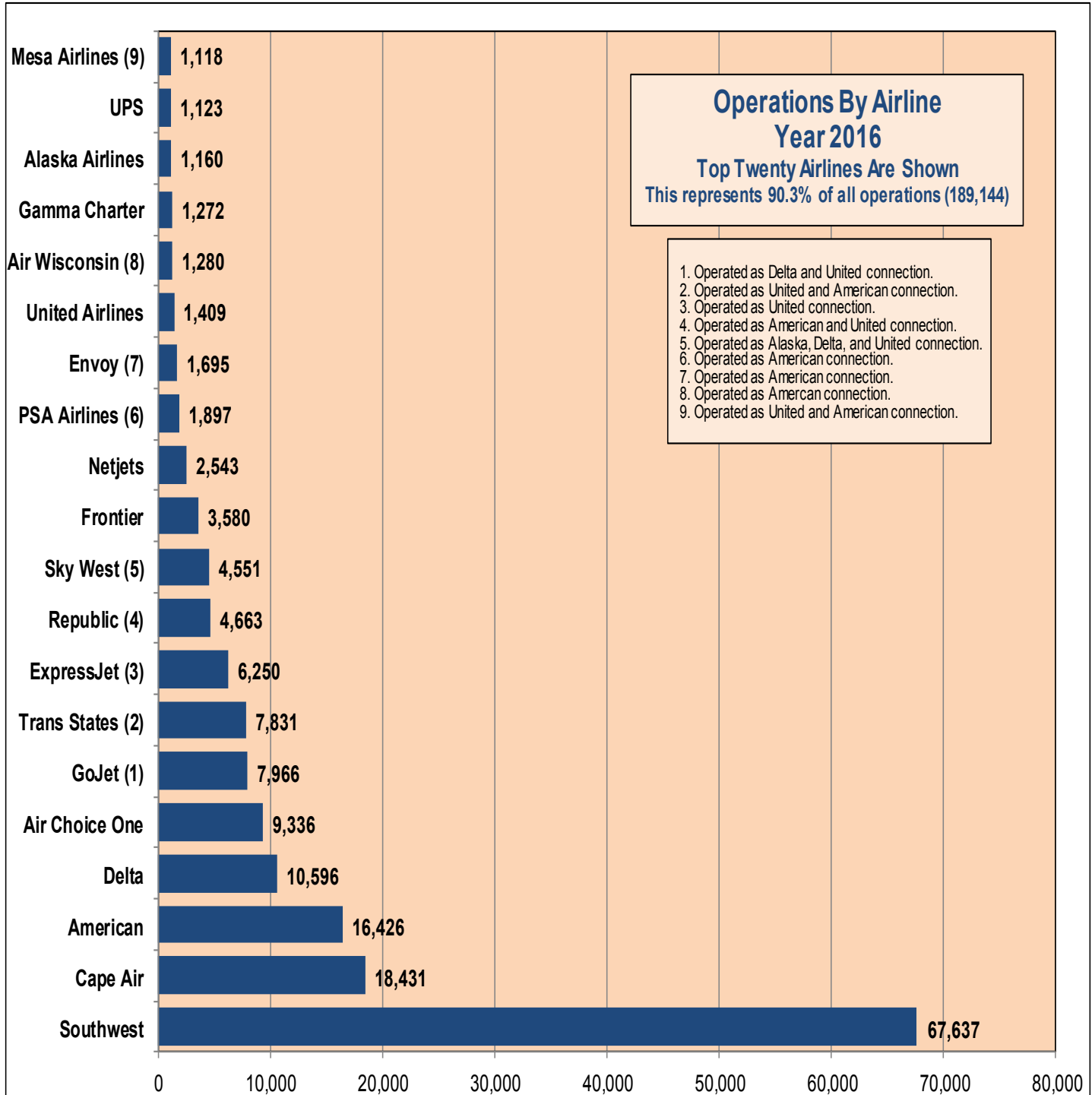
OPERATIONS BY RUNWAY

There were 189,144 operations recorded in the Year 2016 as compared to 183,806 operations in 2015, an increase of +2.9%. The most utilized runway for known arrivals was Runway 30R (39,442) with 42.1%. The most utilized runways for known departures were Runway 12L (37,130) with 39.7% and Runway 30L (37,122) with 39.7%. There were 187,321 (99.0%) operations in which the runway was identified and 1,823 operations (1.0%) where the runways were not identified.



OPERATIONS BY AIRLINE

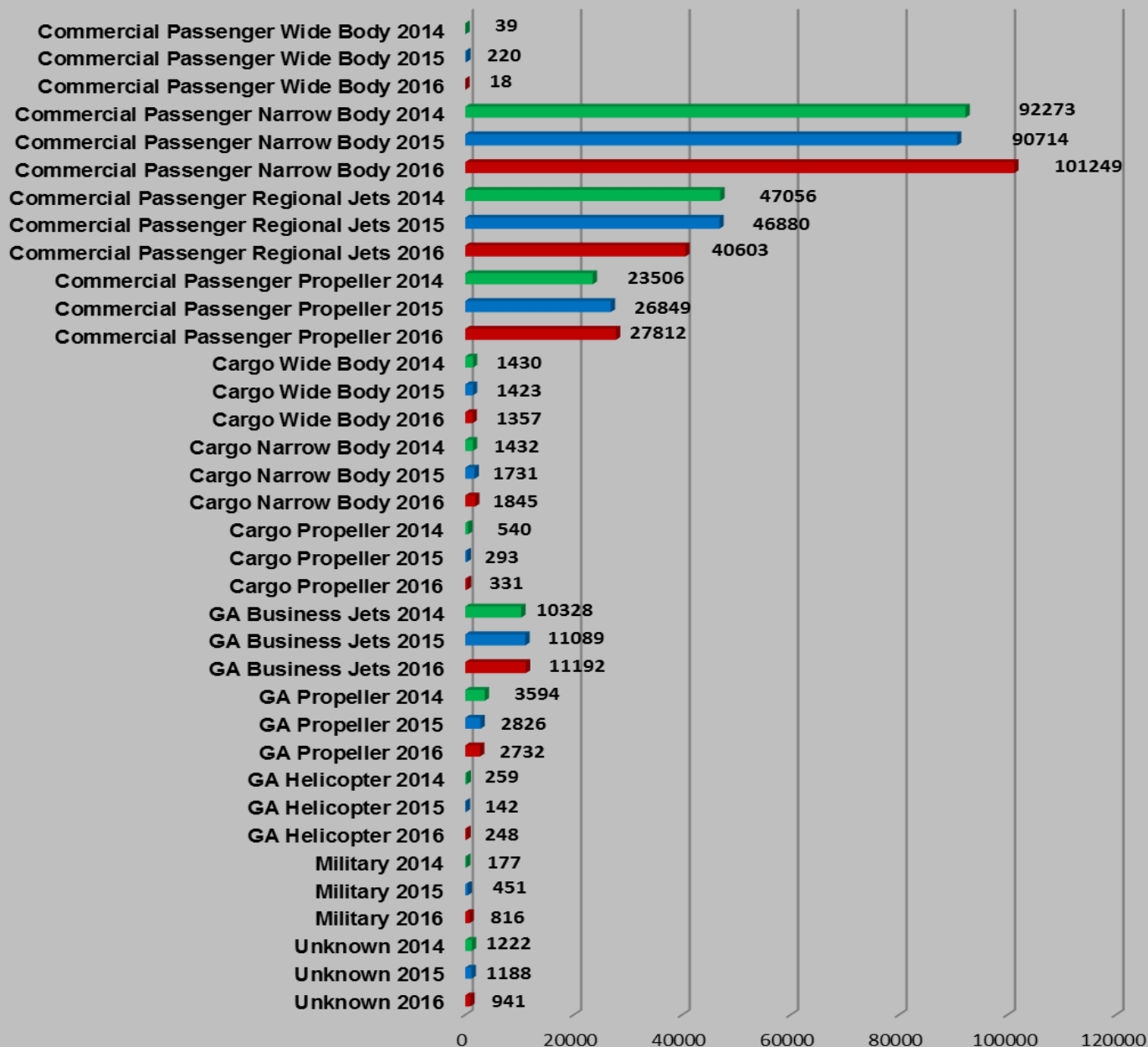
The top twenty airlines accounted for 90.4 % of all operations. The top three airlines were Southwest Airlines with 35.8% of all operations, followed by Cape Air (9.7%), and American (8.7%). Nine of the eleven regional commercial passenger jet airlines that serve Lambert Airport were in the top twenty airlines and accounted for 19.7% of the 2016 operations. There were 100 Part 121 and Part 135 airlines that utilized Lambert-St. Louis International Airport during this period. Part 121 airlines are commercial scheduled airlines and Part 135 airlines are charter and air taxi.



# OPERATIONS BY TYPE OF SERVICE

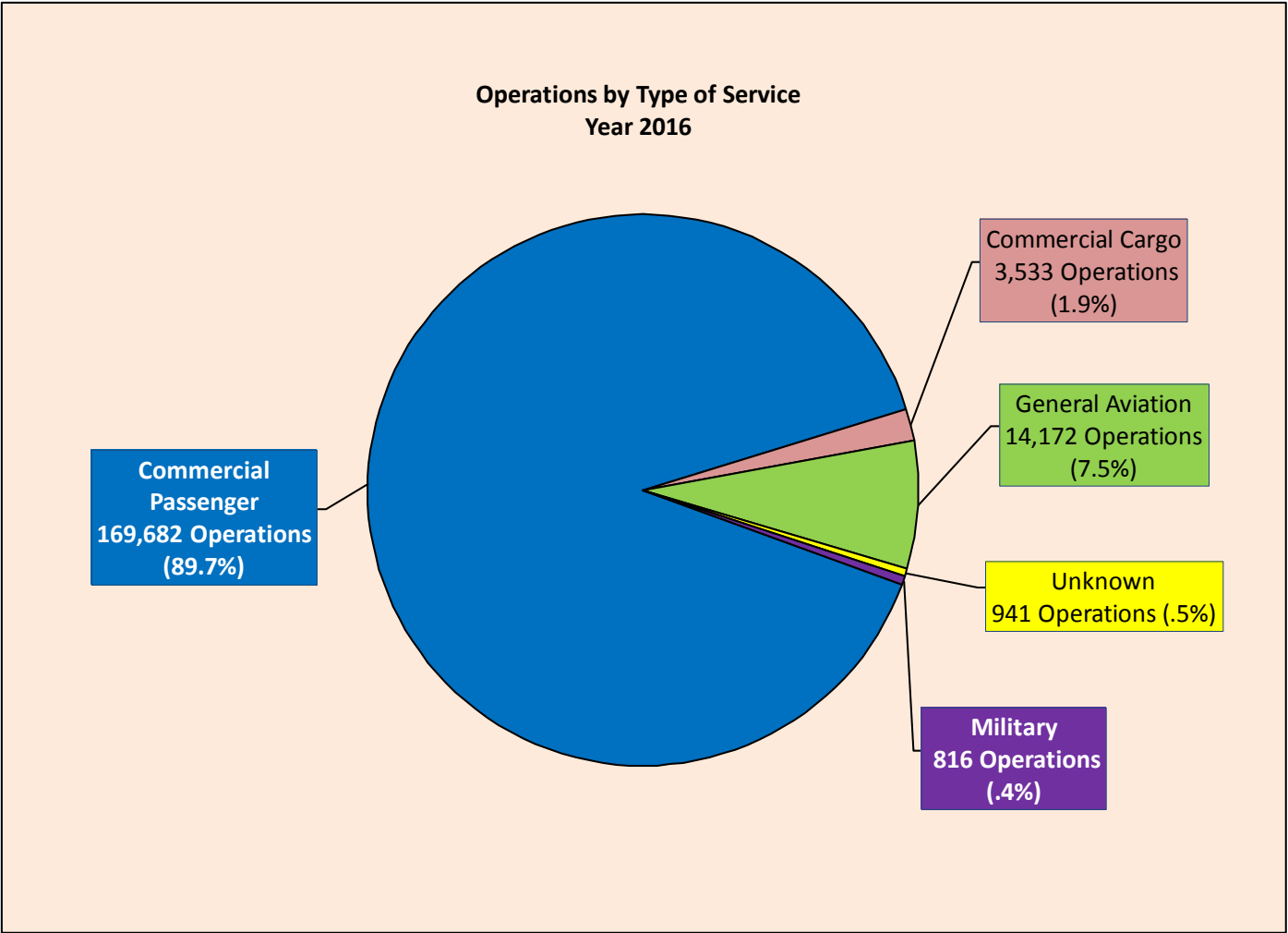
In the Year 2016, operations increased +2.9% from 2015. The increase in commercial narrow body operations (+11.6%) and commercial passenger propeller operations (+3.6%) made up for the decrease in commercial passenger regional jets (-14.4%). In 2015, there was an increase passenger wide body operations as a result of American Airlines testing, training and certifying the Boeing 787-800 for passenger flight. In 2016, the wide body operations were significantly down. Cargo operations were up +2.5% in 2016. Commercial cargo propeller operations were up +8.8% and cargo narrow body operations were up +6.2%.

## Comparison Years 2014 - 2016



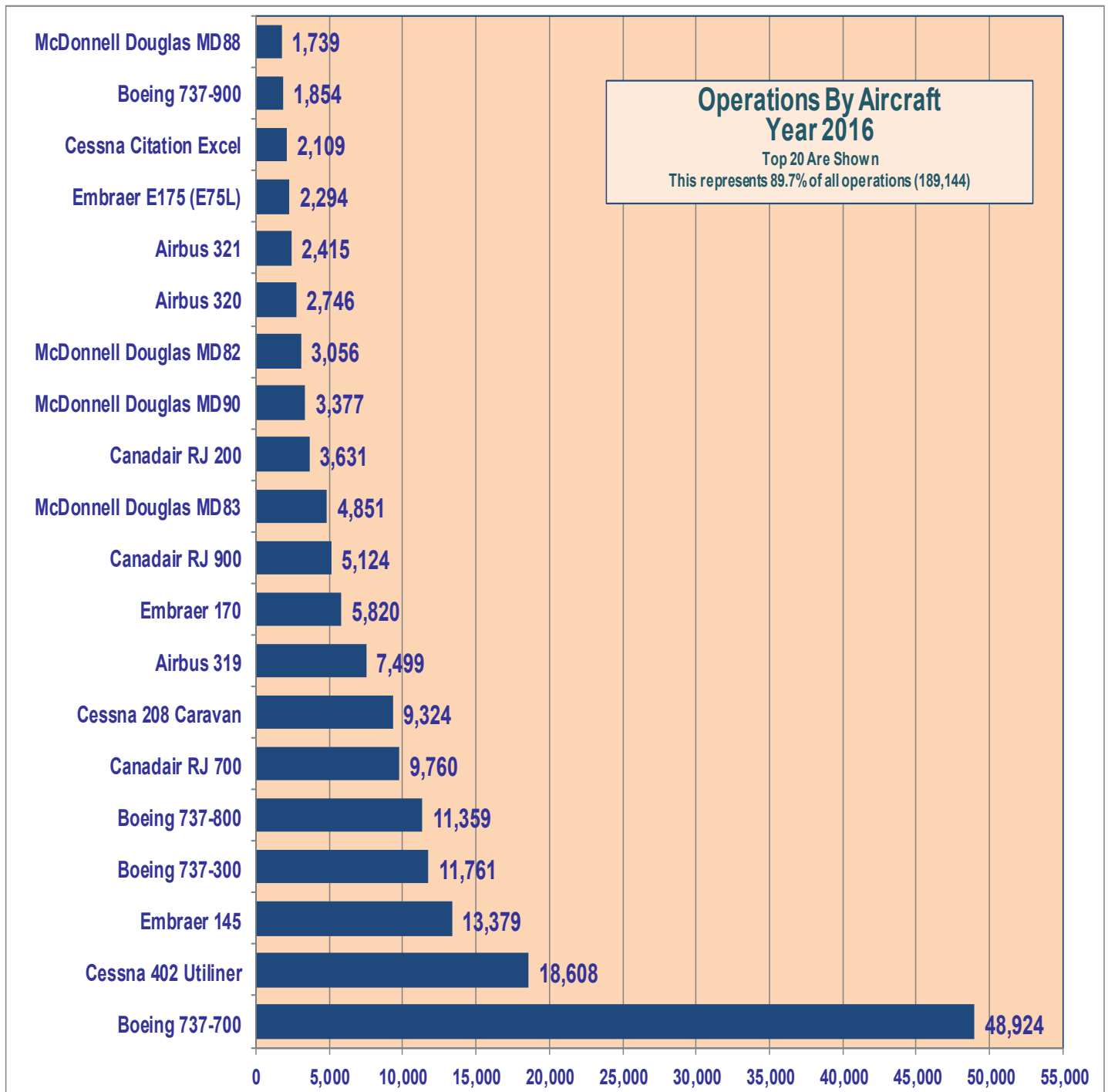
OPERATIONS BY TYPE OF SERVICE

Commercial Passenger, Commercial Cargo, General Aviation, Military, and Unknown Operations are the five categories of operations. The Unknown Operations category include aircraft that were not identified by either the airline or aircraft equipment type, or both. The largest number of operations was Commercial Passengers with 89.7%. General Aviation was at 7.5%, Commercial Cargo had 1.9%, and the Unknown category represented 0.5% of the total operations. Reported Military operations were at 0.4%, however, military operations are filtered and not all military operations are reported in the data.



OPERATIONS BY AIRCRAFT

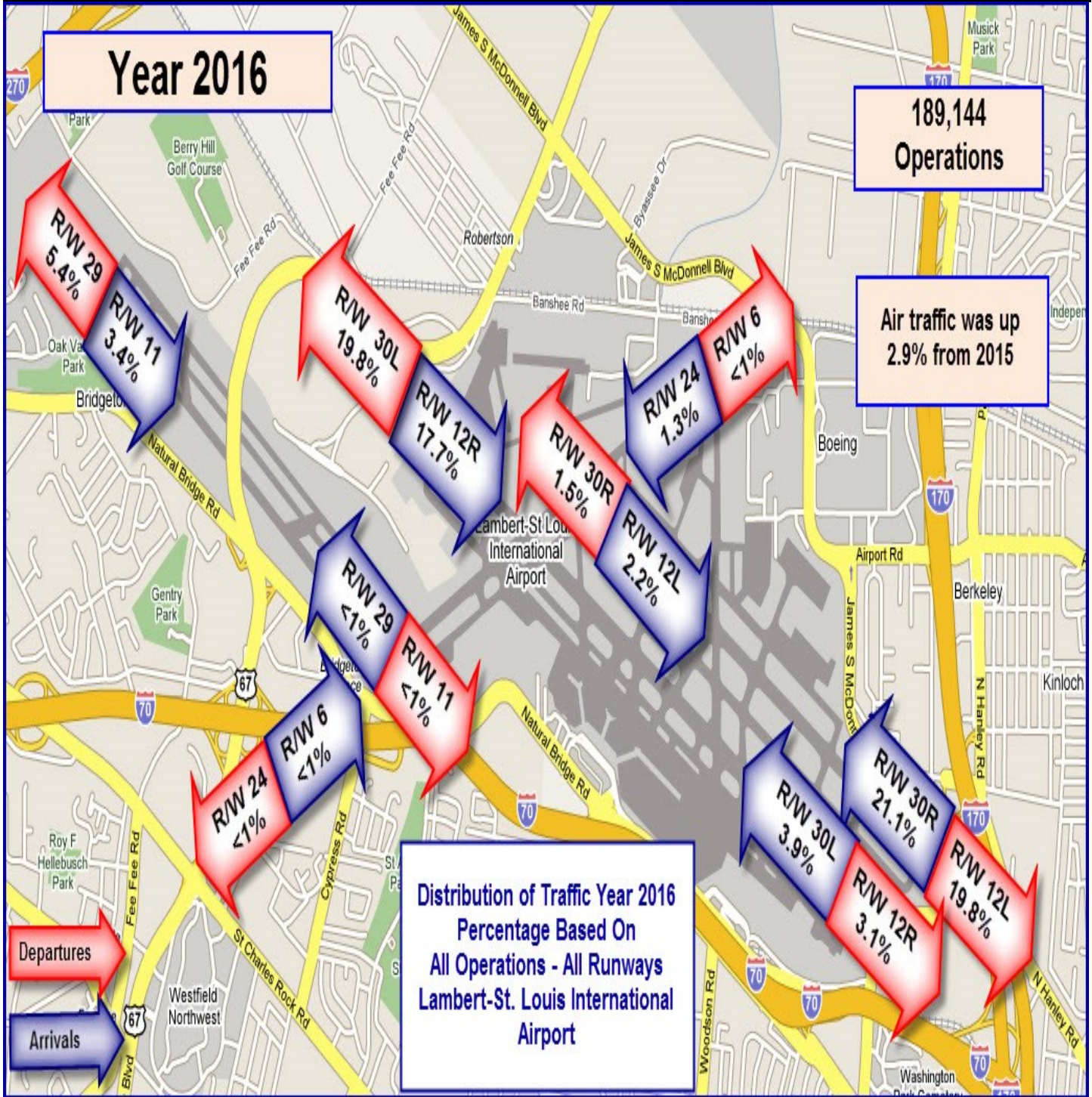
The top three aircraft operating at Lambert in 2016 were the Boeing 737-700 model with 48,924 operations (25.9%), the Cessna 402 Utiliner with 18,608 operations (9.8%), and the Embraer 145 aircraft with 11,761 operations (6.2%). The top ten aircraft from 2015 to 2016 remained the same. In 2016, the Boeing 712 and the Bombardier Challenger 600 were replaced by the Embraer 175 and the Airbus 321 in the top twenty aircraft. There were 245 different types of aircraft that landed at Lambert-St. Louis International Airport during this period according to NAS data.





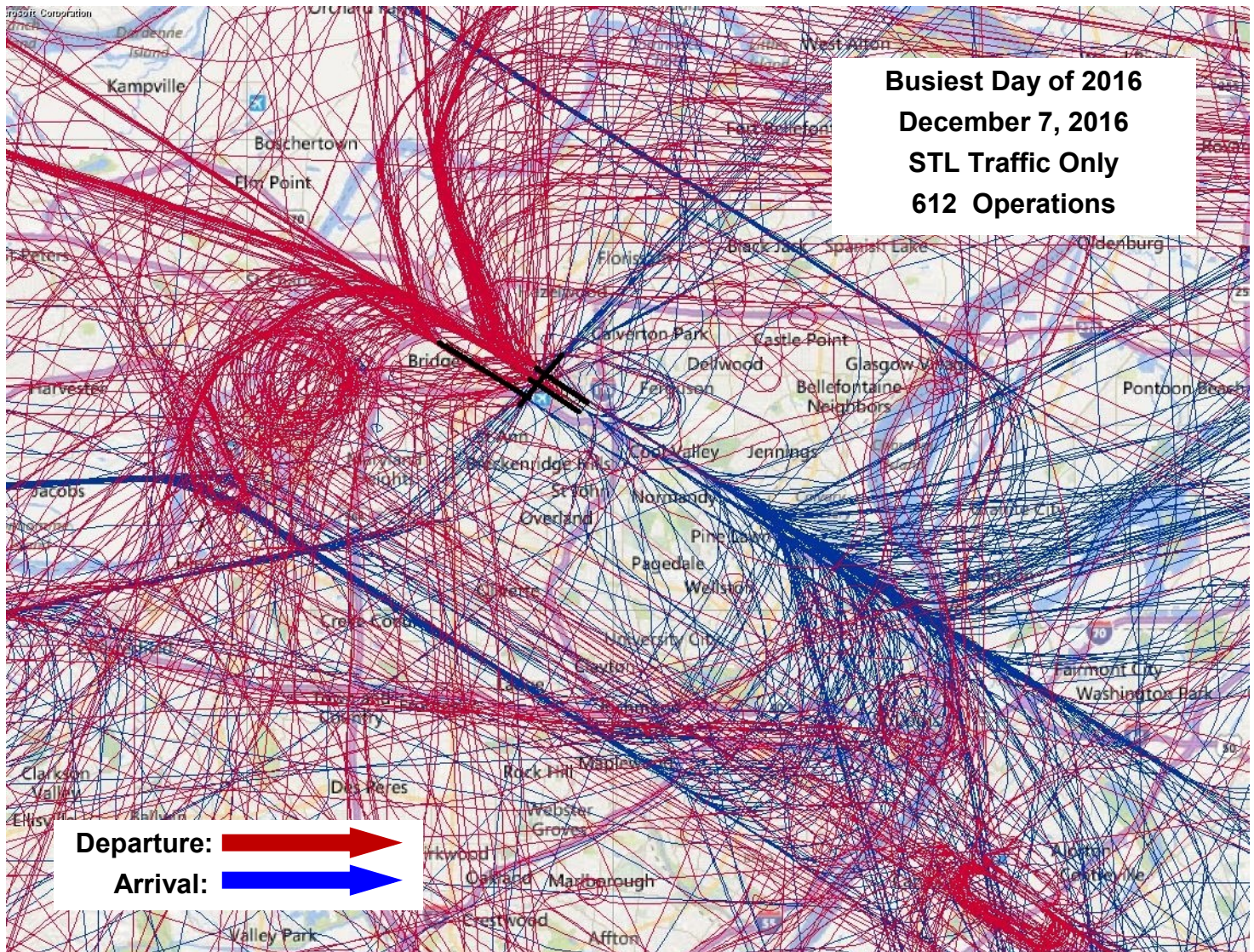
## DISTRIBUTION OF TRAFFIC

There were 189,144 operations 2016 compared to 183,806 operations in 2015, an increase of 2.9%. The chart below shows the total percentages of use for known runways for this period. The most utilized runways for known departures were Runway 12L (19.8%) and 30L (19.8%). The most utilized runway for known arrivals was Runway 30R (21.1%). The crosswind runway 6-24 was the least used runway for this period. The Distribution of Traffic (Westbound vs. Eastbound) for the 2016 was 53.7% westbound and 46.3% for eastbound operations.





## HIGHEST DAILY NUMBER OF OPERATIONS YEAR 2016



**LAMBERT-ST. LOUIS**  
**INTERNATIONAL AIRPORT®**

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Prepared by Lambert St. Louis International Airport