Federal Aviation Administration

AIR TRAFFIC BY THE NUMBERS

June 2025

2025-AJO-094

Air Traffic Organization Leadership

Refer to www.faa.gov/about/office_org/headquarters_offices/ato/leadership for the current Air Traffic Organization (ATO) leadership.

FAA Contributors to ATO By the Numbers

- **Air Traffic Organization (ATO)**
  - **AJR - System Operations**
    - **AJR-G Performance Analysis**
    - **AJR-B Flight Service**
  - **AJI - Safety and Technical Training Services**
    - **AJI-3 Policy and Performance**
  - **AJM – Program Management Organization**
    - **AJM-33 Aviation Weather & Aero Services**
  - **AJT – Air Traffic Services**
  - **AJV – Mission Support Services**
    - **AJV-A370 US NOTAM Operations Team**
- **Non-ATO**
  - **AOC – Office of Communications**
  - **ABP-230 – Data Analysis and Reporting Services Branch**
  - **APO – Aviation Policy & Plans**
  - **AST – Office of Commercial Space Transportation**
  - **AVS – Aviation Safety**

Data Sources

Database Name	Owned/Managed by
Aviation System Performance Metrics (ASPM)	AJR-G
Operations Systems Network (OPSNET)	AJR-G (archive), AJM and AJW
National Traffic Management Log (NTML)	AJR-G (archive), AJM and AJW
Traffic Flight Management System (TFMS)	AJR-G (archive), AJM and AJW
National Offload Program (NOP)	AJR-G (archive) and AIT
U.S. Civil Airmen Statistics	APO
Runway Incursion Data	AVS
BTS T-100 Market and Segment Data	Bureau of Transportation Statistics

Table of Contents

Introduction

Air Traffic by the Numbers, or the *ATO Fact Book*, is a source book containing annual U.S. airport and air traffic control operations and performance data from the Federal Aviation Administration (FAA). It also includes information on air passenger travelers, runway incursions, commercial space launch activity, the economic impact of aviation, and so on.

The *ATO Fact Book*, first published by the Office of Performance Analysis, Air Traffic Organization (ATO) of the FAA in 2017, is updated annually, with current data up until FY2024. This document represents the 9th edition of *Air Traffic By the Numbers*.

The storyline behind this year's *Fact Book* is the ongoing recovery from the impact of the COVID-19 global pandemic on air traffic. FY2024 sees NAS wide air traffic returning to pre-pandemic levels while some metrics are surpassing them.

The format of this edition is unchanged from last year. Section 1 includes some overall aviation-related statistics. NAS demand and efficiency measures appear in Section 2. Delay, diversion, go-around, and cancellation information follow in Section 3. Section 4 includes the latest data on the use of various traffic management initiatives (TMI). Safety metrics are reported in Section 5 and other ATO topics of interest, such as flight services and commercial space, are available in Section 6. The *ATO Fact Book* also includes historical annual airport tower and center operations for 1946-2024 (Appendix III).

Below are brief selected results for FY2024.
- The number of air traffic controllers increased by 2.9%, to 14,264.
- The number of pilot certificates increased by 5.2% in CY2024 to 848,770; and remote (or drone) pilot certificates increased by 16%, to 427,598.
- The number of passengers flown by air carriers rose above the pre-pandemic average level of 1 billion passengers in FY2017-2019 by 6.5%, to 1.1 billion in FY2024.
- IFR flights in the U.S. rose by 3.4%, to 16.1 million, reaching the pre-pandemic baseline average of 16.1 million in FY2017-2019.
- VFR flights exceeded pre-pandemic levels by 5%, to 14.5 million.
- Core 30 airport operations rose by 4.7%, to 12.7 million. Operations handled by stand-alone TRACONS rose by 3.3%, to 19.8 million, and operations handled by centers rose by 3.6%, to 43.6 million (Section 2). Airport, TRACON, and center average operations were higher pre-pandemic (FY2017-2019), at 13 million, 19.9 million, and 43.8 million, respectively.
- Delays at the Core 30 airports increased by 13%, however have decreased by 38.6% compared to pre-pandemic levels. Weather, runway and volume were the leading causes of delay.
- Commercial space launches increased 34% to 157 launches

This publication benefited from the contributions of many offices and individuals throughout the Air Traffic Organization and the Federal Aviation Administration. As always, we thank everyone who participated in this effort.

System Events and Analysis Group (AJR-G3)
Office of Performance Analysis
System Operations Services
Air Traffic Organization
Federal Aviation Administration
U.S. Department of Transportation

May 2025

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Section 1. FAA Air Traffic Management System Overview for FY2024

ATO Program and Financing **Operations Budget Estimate (in $billions) (FY2024)**	**$8.8**
Flights Handled	**16,191,379**
Scheduled	9,802,886
Unscheduled	6,388,493
Airspace (in millions of sq mi)	**29.4**
Oceanic	24.1
Domestic	5.3
Airports	**19,482**
Public Use Airports	5,146
Private Use Airports	14,336
Federal Air Traffic Control Facilities [1]	**313**
Stand-Alone ATC Tower Facilities	142
Stand-Alone TRACON Facilities	25
Combined ATC Tower/TRACON Facilities [2]	121
Centers and Combined Control Facilities	25
ARTCC	21
CCFs	4
Contract Air Traffic Control Towers [3]	**264**
Controllers	**14,264**
Flights Service	
Alaska FSS	**17**
Federal Contract FSS	**2**
NAVAIDS	**12,691**
Alaska Weather Cameras	**251**
GA Aircraft (CY2023)	**206,953**
Fixed Wing	166,788
Rotorcraft	10,051
Experimental/Light-craft/Other	30,114
GA Flight Hours (CY2023)	**28,563,000**

1. HNL/HCF are counted as a single facility.
2. Combined ATC towers and TRACONs are located within the same building.
3. Includes two new contract towers introduced during FY2024.

Sources:

ATO Program and Financing: U.S. Dept. of Transportation, Budget Estimates: FY2024, Federal Aviation Administration, Exhibit II-2.

Flights Handled: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G); Innovata, Flight Schedule Database, accessed January 28, 2025.

Airspace: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G).

Airports and **NAVAIDS**: Federal Aviation Administration, Air Traffic Organization, Airport Safety, Airport Data and Information Portal (ADIP), January 29, 2025. https://adip.faa.gov/agis/public/#/airportSearch/advanced ; Federal Aviation Administration, Air Traffic Organization, Technical Operations (AJW), Monthly NAS Operational Facilities Inventory, October 1, 2024. https://my.faa.gov/org/linebusiness/ato/operations/ajw1/noag/nas_policy/fsep/media/NOF.pdf

ATC Towers, TRACONs, and **Enroute Centers & CCFs**: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), September 2024

Alaska Weather Cameras: Federal Aviation Administration, Air Traffic Organization, Aviation Weather & Aeronautical Services (AJM-33), FAA Aviation Weather Cameras, accessed January 29, 2025. https://weathercams.faa.gov

Controllers: Federal Aviation Administration, Office of Finance and Management, Data Analysis and Reporting Services Branch (ABP-230), Air Traffic Controller and Academy Movement Report - September FY2024, September 29, 2024.

GA Aircraft and **GA Flight Hours**: Federal Aviation Administration, Aviation Safety (AVS), General Aviation and Part 135 Activity Surveys – CY2023, Tables 1.1 and 1.3, January 29, 2025. https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/

Core 30 Airports

Annual Operations FY24

Annual Airport Operations

195,687 — 727,600

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Air Route Traffic Control Centers (ARTCC)

ARTCC Airspace Traffic Count FY2024

ARTCC	Count
ZSE	1,162,790
ZMP	1,817,877
ZBW	1,457,986
ZLC	1,550,807
ZAU	2,114,290
ZOB	2,065,288
ZDV	2,015,038
ZID	2,079,300
ZNY	2,434,601
ZOA	1,724,009
ZKC	1,831,529
ZDC	2,445,645
ZLA	2,369,065
ZME	2,231,327
ZTL	3,076,153
ZAB	1,785,384
ZFW	2,323,288
ZJX	2,610,401
ZHU	2,324,862
ZMA	2,644,294

Annual Center Operations

194,319 — 3,076,153

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Air Traffic Controllers

As of the end of FY2024, the FAA air traffic controller total was 14,264, an increase from 13,853 at the end of FY2023.

	FY23	FY24
Academy Graduate (AG)	762	878
Certified Professional (CPC)	10,593	10,733
Certified Professional in training (CPCIT)	985	953
Developmental (D1)	144	224
Developmental (D2)	477	497
Developmental (D3)	487	492
Controllers Academy	405	487
Total Head Count	13,853	14,264

Among Core 30 airports, Philadelphia (PHL), Miami (MIA), and Charlotte (CLT) reported large headcounts because these are combined ATCT TRACONs. PHL had the highest net gain of controllers at 23, while Las Vegas (LAS) had the highest net loss at 4. Refer to Appendix I for a list of facility codes.
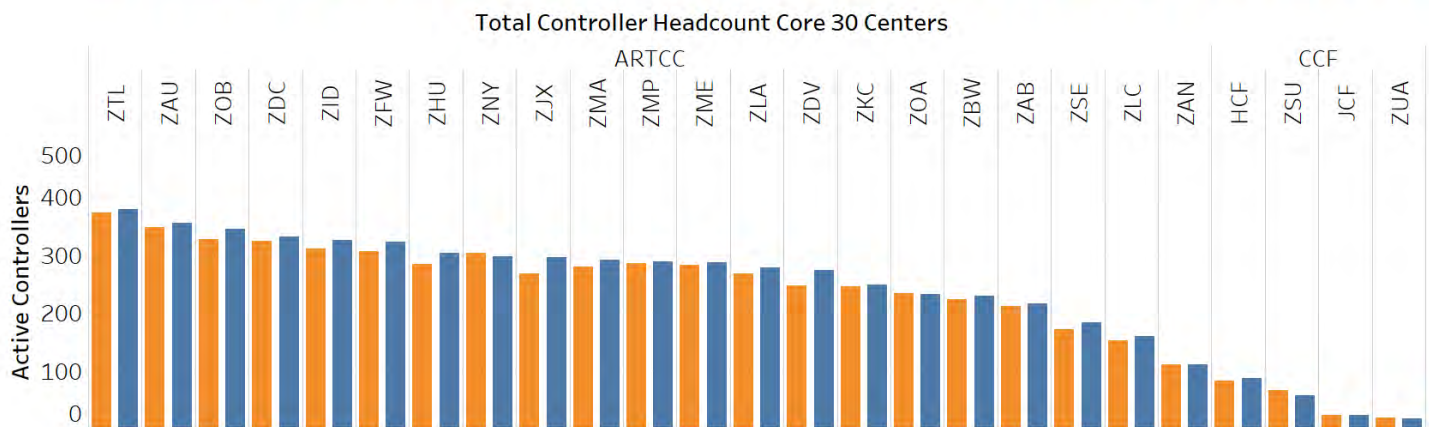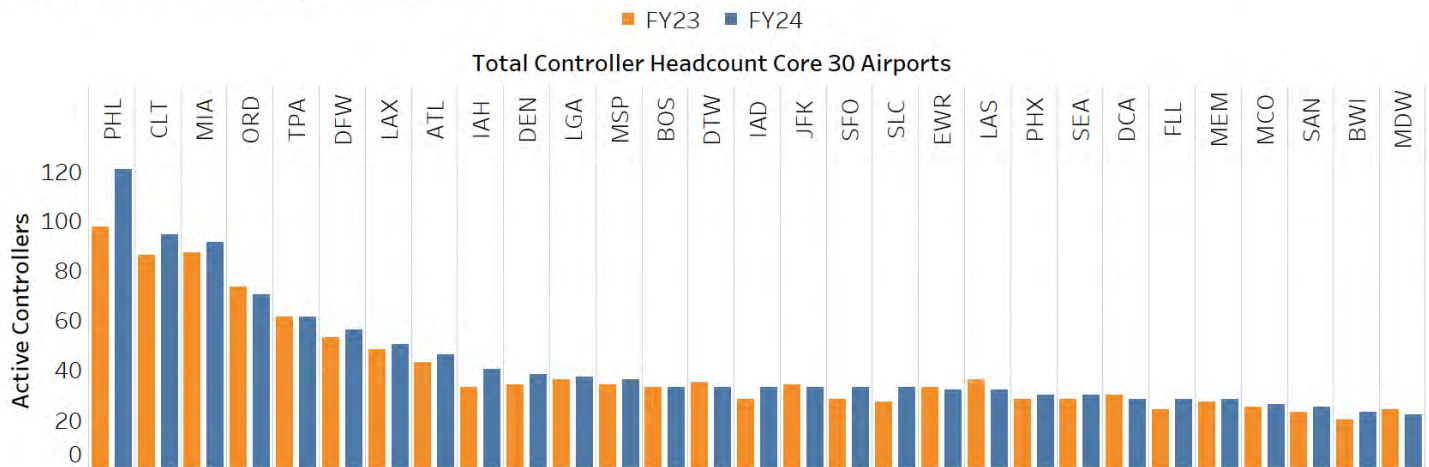
Total Controller Headcount Core 30 Airports
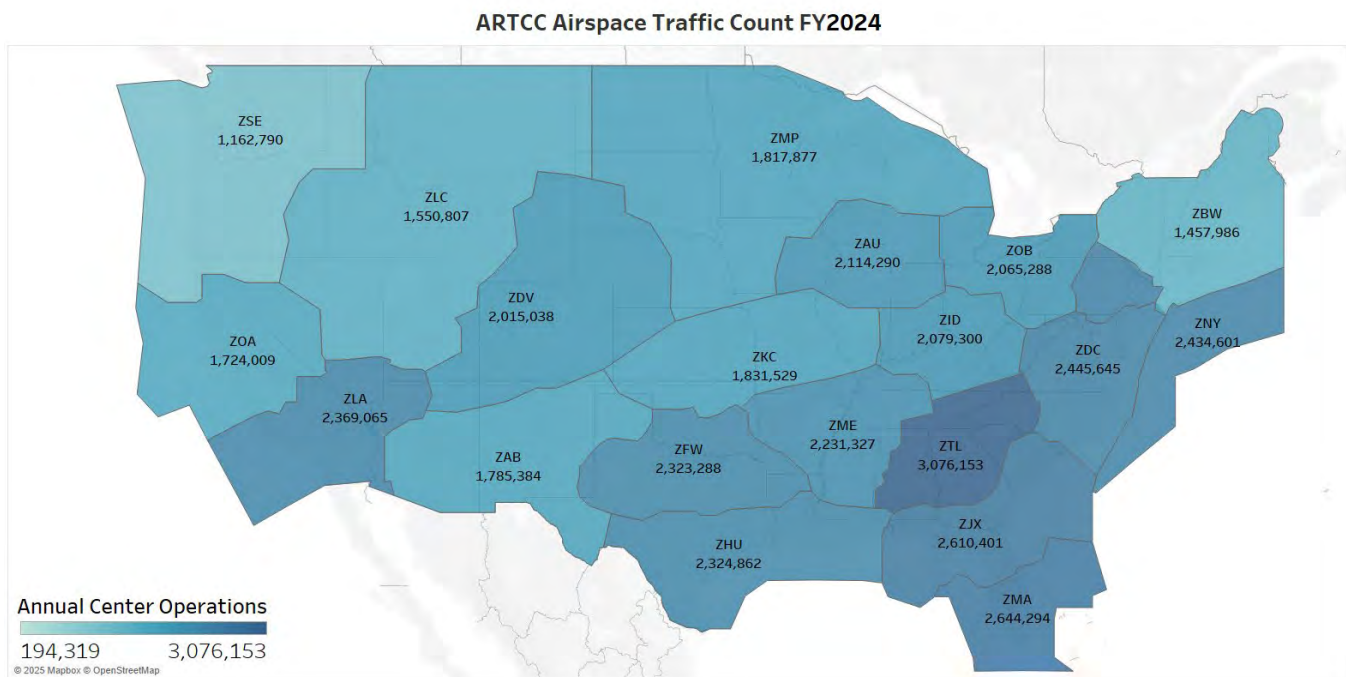

Total Controller Headcount Core 30 Centers

Source: Federal Aviation Administration, Office of Finance and Management, Data Analysis and Reporting Services Branch (ABP-230), Air Traffic Controller and Academy Movement Report - September FY2024, September 29, 2024.

Pilot Certificates

The table below shows the number of pilot certificates held by age group (upper panel below) and by year (lower panel). The upper panel illustrates that student, commercial, and remote (or drone) pilots tend to be younger, while airline transport pilots tend to be older. The lower panel informs us that the number of total active pilot certificates held in the U.S. increased by 5.2%, from 806,939 in CY2023 to 848,770 in CY2024, mainly due to an increase in student pilot certificates from 316,470 to 345,495. Further, the number of remote pilot certifications (which began in August 2016) increased by 16%, from 368,633 in 2023 to 427,598 in 2024. Note, the pilot total does not include flight instructors and remote pilots.

Estimated Active Pilot Certificates Held by Category and Age Group of Holder, as of December 31, 2024

Type of Pilot Certificates

Age Group	Total	Student	Sport	Recreational	Private 1/	Commercial 1/	Airline Transport 1/	Remote Pilot 2/	Certified Flight Instructor 2/
Total	848,770	345,495	7,309	59	184,558	125,425	185,924	427,598	138,127
14-15	830	830	0	0	0	0	0	0	0
16-19	37,919	28,747	8	2	8,469	693	0	7,665	247
20-24	96,880	51,600	45	1	24,500	18,590	2,144	25,916	11,593
25-29	104,356	57,351	127	0	16,910	19,382	10,586	50,935	17,488
30-34	96,898	54,724	221	5	14,051	13,346	14,551	60,702	14,713
35-39	87,160	42,824	319	2	14,279	11,039	18,697	60,448	14,509
40-44	76,663	31,737	394	0	13,688	9,291	21,553	53,544	14,376
45-49	61,180	21,986	397	2	11,119	7,005	20,671	42,364	11,962
50-54	58,565	16,301	493	5	12,283	7,014	22,469	37,311	11,345
55-59	58,637	13,169	694	3	13,329	7,091	24,351	30,072	10,752
60-64	58,176	10,730	978	7	15,616	7,556	23,289	24,451	9,680
65-69	44,991	7,376	1,158	8	15,951	7,454	13,044	17,287	8,053
70-74	31,294	4,440	1,066	14	12,437	6,648	6,689	10,191	6,143
75-79	20,748	2,419	770	7	7,445	5,521	4,586	4,813	4,433
80 and over	14,473	1,261	639	3	4,481	4,795	3,294	1,899	2,833

Year	Total	Student	Sport	Recreational	Private 1/	Commercial 1/	Airline Transport 1/	Remote Pilot 2/	Certified Flight Instructor 2/
2015	590,038	122,729	5,482	191	186,786	116,291	158,559		102,628
2016	584,361	128,501	5,889	178	174,517	112,056	163,220	20,362	104,382
2017	609,306	149,121	6,097	157	174,516	114,186	165,228	69,166	106,692
2018	633,316	167,804	6,246	147	175,771	115,776	167,572	106,321	108,564
2019	664,563	197,665	6,467	130	173,080	116,572	170,649	160,302	113,445
2020	691,689	222,629	6,643	107	172,945	119,245	170,120	206,322	117,558
2021	720,603	250,197	6,801	86	173,606	119,827	170,086	254,587	121,270
2022	756,927	280,582	6,957	80	176,328	119,832	173,148	304,256	125,075
2023	806,939	316,470	7,144	72	180,233	122,282	180,738	368,633	131,577
2024	848,770	345,495	7,309	59	184,558	125,425	185,924	427,598	138,127

1/ Includes pilots with an airplane and/or a helicopter and/or a glider and/or a gyroplane certificate. Pilots with multiple ratings are reported under highest rating. For example a pilot with a private helicopter and commercial airplane certificates are reported in the commercial category.
2/ Not included in total active pilots.
Blank Not applicable.

Source: Federal Aviation Administration, Office of Aviation Policy and Plans (APO), U.S. Civil Airmen Statistics, 2024, Table 12, February 4, 2025. https://www.faa.gov/data_research/aviation_data_statistics/civil_airmen_statistics/

Commercial Flight and Available Seat Mile (ASM) Trends

Commercial air passenger travel continues to recover from the impact of the COVID-19 pandemic. The pandemic affected travel numbers from FY2020 through FY2023 (graph and first table below). From FY2023 to FY2024, the number of scheduled commercial flights rose by 4.9% to 10.7 million (graph) and the number of passengers rose by 6.5% to 1.1 billion (table). Revenue passenger miles (RPMs) and available seat miles (ASMs) also increased, by 8.75% and 9.2%, to 1.6 and 1.95 trillion, respectively (first table). The load factor, the percentage of available seat miles flown by paying commercial passengers is back to pre-pandemic levels. The table below shows passenger numbers for the past two recent fiscal years as well as for the pre- and post-pandemic averages.

The second table shows the economic impact of civil aviation prior to the pandemic and the initial recovery, in terms of jobs, earnings, and overall impact in dollar and percentage terms. The impact of 4.0% in CY2022 is still slightly below the pre-pandemic impact of 4.9% in CY2019. Estimates for more recent years are not yet available.

Trends in Commercial Flights and Available Seat Miles (ASMs), FY 2011 to 2024
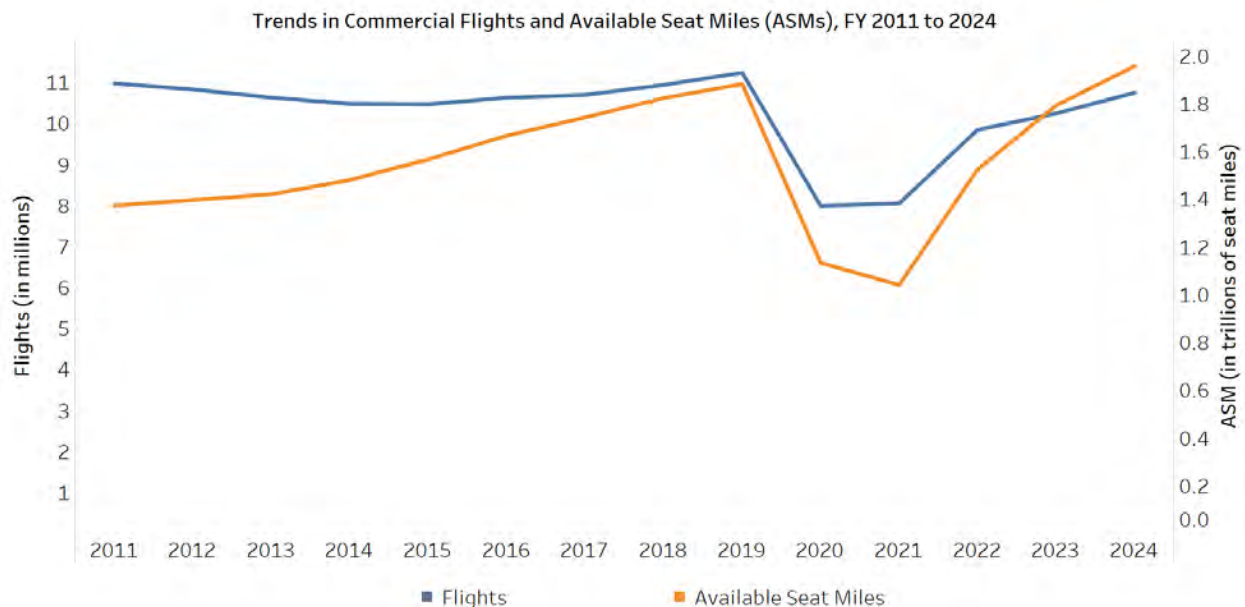
Source: U.S. Dept. of Transportation, Bureau of Transportation Statistics, T100 Segment Data, April 7, 2025.

Passengers				
	FY17-19	FY21-23	FY2023	FY2024
Yearly Passengers	1,016,084,476	850,993,824	1,045,072,823	1,113,105,545
Average Daily Passengers	2,783,793	2,331,490	2,863,213	3,049,604
Revenue Passengers Miles (trillions)	1.50	1.12	1.49	1.62
Available Seat Miles (trillions)	1.81	1.45	1.79	1.95
Passenger Load Factor (%)	82.76%	76.95%	83.04%	82.70%

Economic Impact of Civil Aviation				
	CY2019	CY2020	CY2021	CY2022
Aviation in US generates # jobs	10,393,000	4,931,000	7,072,000	9,397,000
Earnings of (billions)	$541.10	$259.10	$371.50	$501.60
Aviation contributes annually (trillions)	$1.92	$0.91	$1.32	$1.79
Constitutes % of GDP	4.9%	2.3%	3.1%	4.0%

Instrument Flight Rule (IFR) and Visual Flight Rule (VFR)* Flights across the NAS

By FAA Order, *Air Traffic by the Numbers*, published by the Office of Performance Analysis (AJR-G), is the official source of IFR flights counts. During FY2024, the number of IFR flights was 16.1 million. AJR-G data show the number of IFR flights rose by 3.4%, and the number of VFR flights rose by 3.6% to 14.5 million. Compared to FY2019, prior to the COVID pandemic, IFR flights decreased by 1.4% and VFR flights have increased by 13.1%.

IFR & VFR Flights Handled by the ATO, FY2009-FY2024
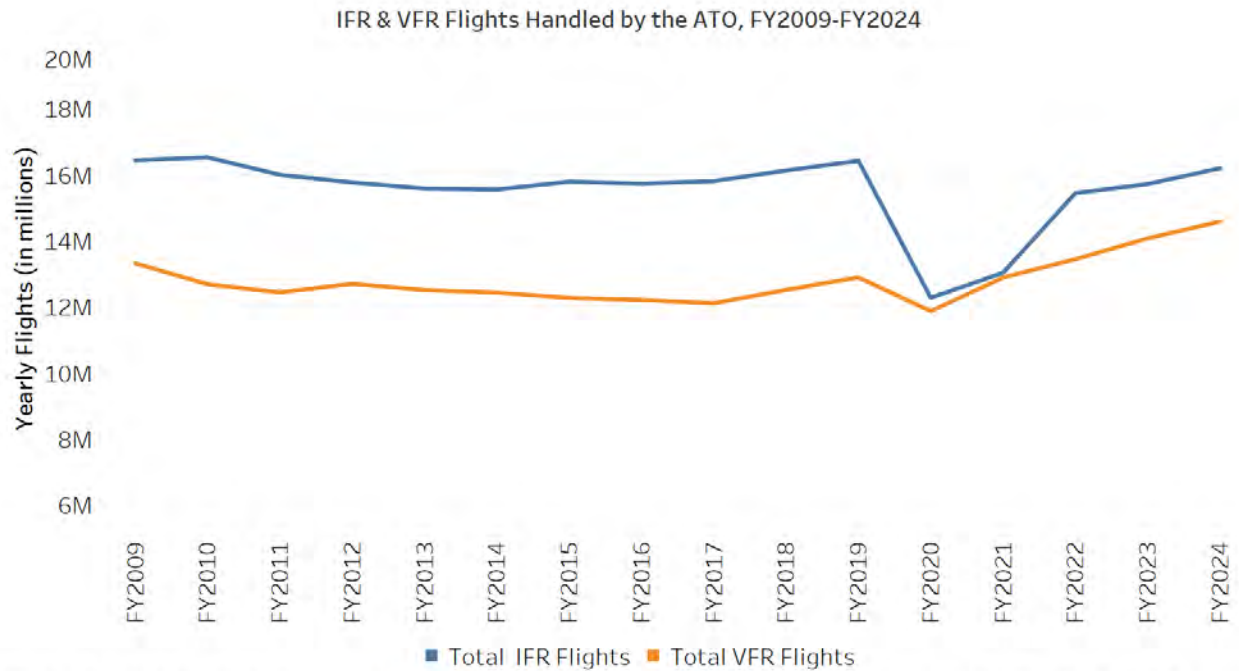
*Note: Total VFR activity is approximated as airport arrival plus departure operations, divided by 2; plus VFR overflights. Editions of the ATO Fact Book prior to April 2023 did not include VFR overflights.

Total numbers of fiscal year annual IFR and VFR flights also appear in the table below.

Fiscal Year	Total IFR Flights	Total VFR Flights
FY2009	16,428,893	13,314,949
FY2010	16,522,406	12,678,715
FY2011	15,992,536	12,433,620
FY2012	15,760,241	12,693,012
FY2013	15,576,396	12,504,343
FY2014	15,546,452	12,425,953
FY2015	15,782,675	12,265,462
FY2016	15,724,478	12,203,468
FY2017	15,800,679	12,104,334
FY2018	16,122,488	12,507,815
FY2019	16,416,056	12,887,828
FY2020	12,270,055	11,864,718
FY2021	13,028,643	12,882,339
FY2022	15,436,595	13,439,378
FY2023	15,712,724	14,066,582
FY2024	16,191,379	14,578,088

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Updated April 4, 2025 (for IFR), November 26, 2024 (for VFR).

Section 2. Demand and Efficiency in the NAS

The NAS is composed of 406 airport towers (142 Federal Air Traffic Control Towers (ATCTs) and 264 contract ATCTs), 121 combined ATCT/TRACONs , 25 stand-alone TRACONs, and 25 control centers (21 air route traffic control centers (ARTCC) and 4 combined control facilities (CCF)). Refer to Appendix I for a list of facility codes.

TRACONs handle descending flights received from a center or ascending flights received from an ATC tower (see figure below). Of the 146 TRACONs in the NAS, 121 of them are combined such that the TRACON exists in the same location as the ATC tower. Some examples include, but are not limited to, the Miami, Charlotte, and El Paso towers.

Centers handle all enroute flights operating on Instrument Flight Rule (IFR) flight plans. Centers receive flights from or hand off flights to other centers throughout the flight's enroute phase of operation. They also receive flights or hand off flights to TRACONs when flights enter or exit the enroute phase of operation.

This report reveals the demand observed at some of the busiest facilities, represented by the Core 30 airport towers, the 25 stand-alone TRACONs, and all 25 centers (which include 4 CCFs). Efficiency is also reported based on the following metrics:

**Number of Flights at Any Given Minute**

Average Hourly Capacity

Average Daily Capacity

Core 30 Airport Operations

Airport operations are the sum of the number of airport arrivals and departures. Each flight has a departure and arrival, meaning each flight roughly consists of two airport operations. In FY2024, Core 30 airport operation numbers rose by 4.2%, from 12.2 million in FY2023 to 12.7 million (table below). During the three years before the pandemic (FY2017-FY2019), Core 30 airport operations averaged 13 million; therefore, operations remain below this pre-pandemic level. Among all airports operating with Federal towers, operations rose by 4.5%, to 38.9 million. At all towered airports, 263 federal and 264 contract, operations rose by 3.6%, to 56.5 million.

Also shown below are airport operations for each Core 30 airport. In FY2024, Atlanta (ATL), Chicago O'Hare (ORD), and Dallas-Fort Worth (DFW) had the highest number of operations; operations rose at ATL, ORD and DFW by 3.7%, 5.7% and 8.2% compared to FY2023. Operations returned to pre-pandemic levels at 13 airports (DFW, Denver (DEN), Las Vegas (LAS), JFK, Miami (MIA), Phoenix (PHX), Orlando (MCO), Honolulu (HNL), Washington National (DCA), Charlotte (CLT), Seattle (SEA), San Diego (SAN), and Tampa (TPA).) Refer to Appendix II for the list of Core 30 Airports.
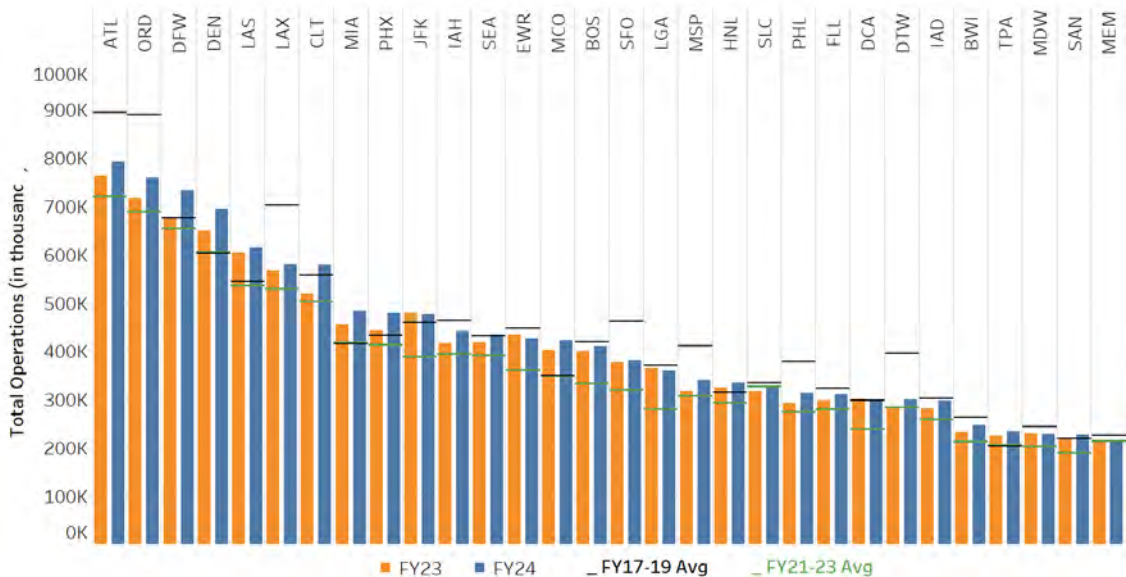
Total Core 30 Airport Operations

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change FY23-24
13,014,040	11,169,724	12,206,459	12,720,892	4.2%

Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24	Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	1	892,531	719,754	762,526	791,067	LAX	6	701,467	528,697	565,995	580,514
BOS	15	418,820	333,029	399,843	410,503	LGA	17	369,527	280,229	364,561	358,210
BWI	26	262,185	213,266	231,933	246,131	MCO	14	348,469	349,353	402,248	420,755
CLT	7	556,837	502,769	518,205	578,192	MDW	28	243,601	203,655	229,425	228,770
DCA	23	297,834	238,708	301,002	299,526	MEM	30	225,764	213,668	212,023	211,898
DEN	4	602,692	605,586	647,440	694,373	MIA	8	414,830	417,836	455,361	482,819
DFW	3	674,069	653,355	675,807	731,518	MSP	18	410,011	306,876	316,496	338,943
DTW	24	394,476	283,418	285,448	299,008	ORD	2	889,128	688,783	716,920	757,750
EWR	13	446,791	360,439	433,363	425,384	PHL	21	378,600	274,637	291,642	313,091
FLL	22	322,202	279,809	297,197	310,764	PHX	9	433,000	413,711	442,858	478,391
HNL	19	314,595	294,027	324,429	334,189	SAN	29	218,941	189,098	218,538	226,044
IAD	25	301,318	258,672	281,198	297,179	SEA	12	431,030	390,694	416,651	434,630
IAH	11	462,986	392,937	415,518	441,319	SFO	16	462,422	320,039	376,900	381,304
JFK	10	458,526	388,710	479,050	475,683	SLC	20	334,366	326,411	317,158	326,095
LAS	5	543,391	535,100	603,015	613,675	TPA	27	203,632	206,459	223,709	233,167

Ranked by FY24 operations.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), November 27, 2024.

Stand-Alone Terminal Radar Control (TRACON) Facilities

TRACON operations are IFR and VFR itinerant operations passed to and from area airports, other TRACONs, or centers, including overflights through TRACON airspace. In FY2024, among the 25 stand-alone TRACONs, operations rose by 3.3% to 19.8 million. Before the pandemic (FY2017-FY2019), stand-alone operations averaged 19.9 million, meaning operations remain below pre-pandemic levels (table below). Among the 121 combined ATCT/TRACONs, operations numbered 19.3 million in FY2024 (not shown below). Across all 146 TRACONs (stand-alone, plus combined), operations rose by 3.3%, from 38 to 39.2 million in FY2024. The pre-pandemic operations (FY2017-FY2019) averaged 38.5 million and the post-pandemic operations (FY2021-FY2023) averaged 36.4 million (not shown below).

Below are operation counts for each of the 25 stand-alone TRACONs for FY2023 and FY2024, the post-pandemic annual average (FY2021-FY2023) and the pre-pandemic annual average (FY2017-FY2019). In FY2024, Atlanta (A80), Chicago (C90), Dallas-Fort Worth (D10), New York (N90), Northern California (NCT), (PCT), and Southern California (SCT) had the highest number of operations with more than 1.1 million each. In FY24, New York (N90) had the largest decrease in operations of -2.9% while Pensacola (P31) had the highest increase in operations of 8%. At 12 of the 25 TRACONs, operations recovered to FY2017-FY2019 pre-pandemic levels (graph and table below). Refer to Appendix I for a list of facility codes.

Total Stand-Alone TRACON Operations

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
19,940,704	18,165,952	19,240,916	19,874,682	3.3%

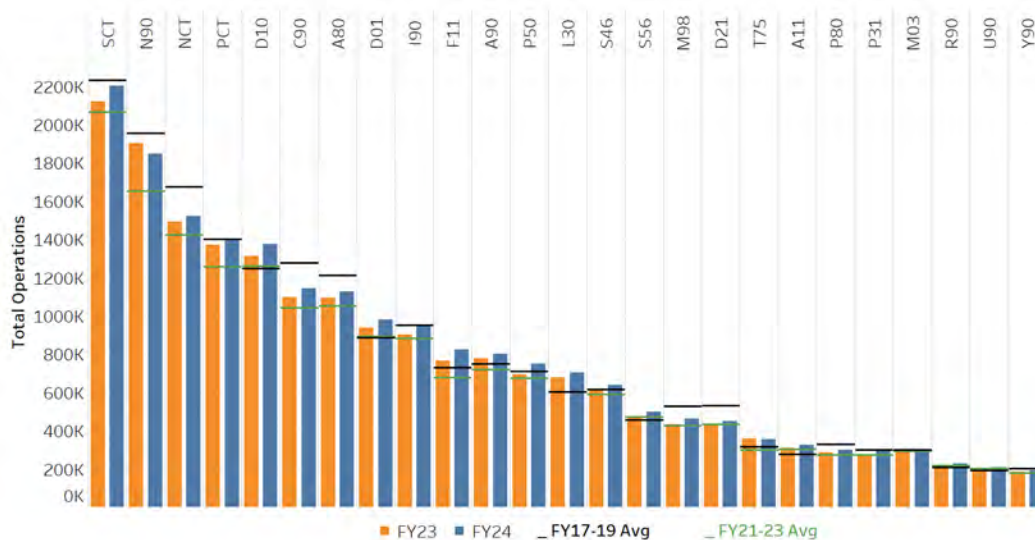| TRACON	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24	TRACON	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
A11	22	275,585	301,582	308,176	327,214	NCT	3	1,674,540	1,423,146	1,492,119	1,522,376
A80	7	1,213,101	1,051,106	1,093,853	1,128,528	P31	21	300,023	273,347	275,554	297,657
A90	10	750,414	721,431	777,434	800,196	P50	11	708,956	674,258	695,344	748,660
C90	6	1,277,423	1,043,934	1,098,161	1,144,563	P80	20	329,709	272,637	285,697	299,972
D01	9	885,750	892,651	936,779	981,053	PCT	4	1,400,750	1,258,716	1,370,604	1,396,884
D10	5	1,247,768	1,260,744	1,311,316	1,373,459	R90	23	209,962	219,373	220,698	228,363
D21	15	530,295	434,630	436,755	448,374	S46	14	615,142	588,247	618,816	638,458
F11	12	730,043	678,369	765,784	824,840	S56	17	457,064	472,458	472,467	498,297
I90	8	951,472	881,315	902,679	949,983	SCT	1	2,230,827	2,064,678	2,119,849	2,203,162
L30	13	602,603	603,939	679,238	702,073	T75	18	316,870	298,219	358,540	356,483
M03	19	301,072	293,469	294,867	292,564	U90	25	193,273	200,799	203,960	208,966
M98	16	526,313	425,811	434,505	461,457	Y90	24	201,964	179,114	184,402	193,096
N90	2	1,953,783	1,651,979	1,903,319	1,848,004						

Ranked by FY24 operations.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), December 2, 2024.

Air Route Traffic Control Centers (ARTCC) and Combined Control Facilities (CCF)

Air route traffic control centers (ARTCC), or enroute, operations include IFR and VFR itinerant operations passing from a TRACON to an ARTCC, or from one ARTCC to another ARTCC, or from an ARTCC to a TRACON. Operation counts include U.S. overflights and oceanic traffic through ARTCC air space that do not arrive at or depart from U.S. territory. In FY2024, enroute operation numbers for the 21 ARTCC and 4 CCFs (combined control facilities) rose by 3.6%, from 42.1 to 43.6 million but are still below the FY2017-FY2019 pre-pandemic average of 43.8 million (table below).

Also shown below are operation counts for FY2023, FY2024, post-pandemic averages for FY2021-FY2023 and the pre-pandemic averages for FY2017-FY2019 by ARTCC. In FY2024, the Atlanta (ZTL), Miami (ZMA), and Jacksonville (ZJX) centers reported the highest number of operations among the ARTCCs, each with more than 2.6 million. Center operations for ZMA, ZJX, Los Angeles (ZLA), Houston (ZHU), Fort Worth (ZFW), Memphis (ZME), Denver (ZDV), Kansas City (ZKC), Albuquerque (ZAB), Salt Lake City (ZLC), Anchorage (ZAN), Honolulu (HCF), San Juan (ZSU), have recovered to pre-pandemic levels (graph and table below). Refer to Appendix I for a list of facility codes.

Total ARTCC & CFF Operations

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
43,879,055	39,139,164	42,129,723	43,659,127	3.6%

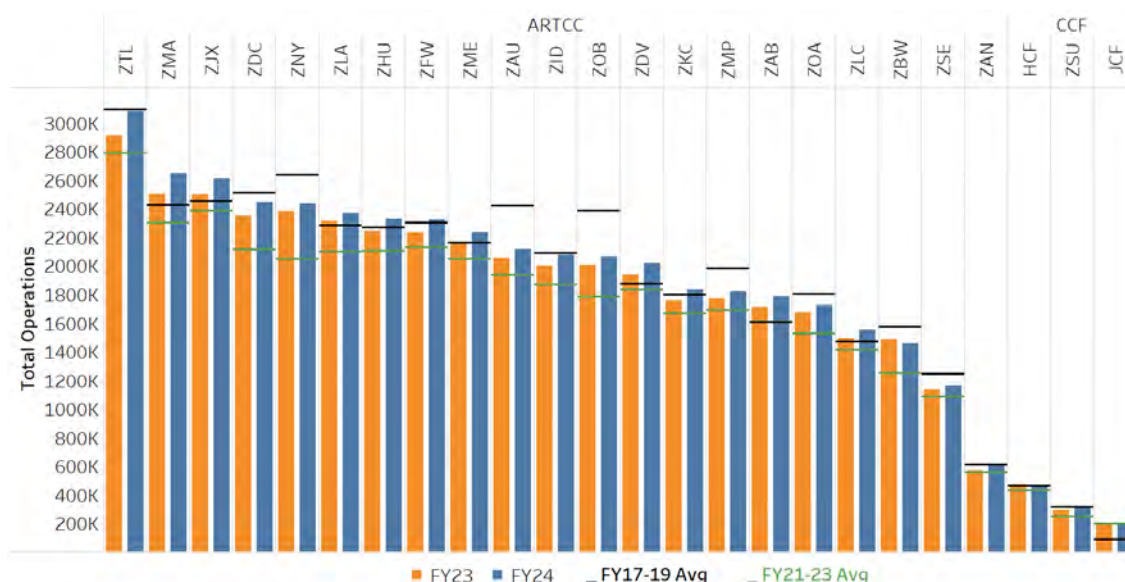| Centers	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ZAB	17	1,609,158	1,612,916	1,710,409	1,785,384
ZAN	21	611,191	557,391	570,946	611,666
ZAU	6	2,421,304	1,938,012	2,053,984	2,114,290
ZBW	18	1,574,246	1,249,641	1,484,095	1,457,986
ZDC	3	2,509,288	2,113,834	2,351,499	2,445,645
ZDV	14	1,874,490	1,830,493	1,934,737	2,015,038
ZFW	8	2,301,123	2,126,588	2,231,636	2,323,288
ZHU	9	2,271,141	2,103,855	2,243,556	2,324,862
ZID	12	2,092,253	1,871,667	2,002,184	2,079,300
ZJX	5	2,452,192	2,386,440	2,494,032	2,610,401
ZKC	15	1,800,362	1,666,962	1,759,811	1,831,529
ZLA	10	2,282,499	2,101,679	2,313,101	2,369,065
ZLC	19	1,471,415	1,416,517	1,492,549	1,550,807
ZMA	4	2,424,266	2,304,430	2,499,387	2,644,294
ZME	11	2,162,893	2,050,939	2,151,988	2,231,327
ZMP	13	1,983,224	1,692,043	1,770,122	1,817,877
ZNY	2	2,637,886	2,047,209	2,382,714	2,434,601
ZOA	16	1,802,700	1,528,252	1,672,262	1,724,009
ZOB	7	2,389,671	1,785,590	2,008,714	2,065,288
ZSE	20	1,246,442	1,086,716	1,137,088	1,162,790
ZSU	23	315,178	250,877	290,882	320,674
ZTL	1	3,092,693	2,786,502	2,908,171	3,076,153
HCF	22	466,374	432,401	476,934	468,534
JCF	24	87,067	198,210	188,922	194,319

Ranked by FY24 operations.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), January 7, 2025.

Average Number of IFR Flights at Any Given Minute during Peak Operational Times

5,500 Flights

Traffic Flow Management System (TFMS) flight data were used to determine the number of flights enroute every minute of the day and by U.S. time zone on July 25, 2024. Peak operational times in the NAS range between 1500 GMT and 2200 GMT. During peak operational times in the NAS on this peak day, there were an average of 5,500 IFR flights enroute in the NAS every minute with a maximum of 5,700 IFR flights.

The figure below shows the average number of flights enroute per minute and flights under air traffic control by time zone. The Eastern Time zone has the largest share of flights in the NAS on average and, in this analysis, also includes flights under air traffic control from Puerto Rico and Bermuda. The Pacific Time Zone category includes all west coast air traffic as well as oceanic operations controlled by Oakland center (ZOA), including Hawaii and Guam.
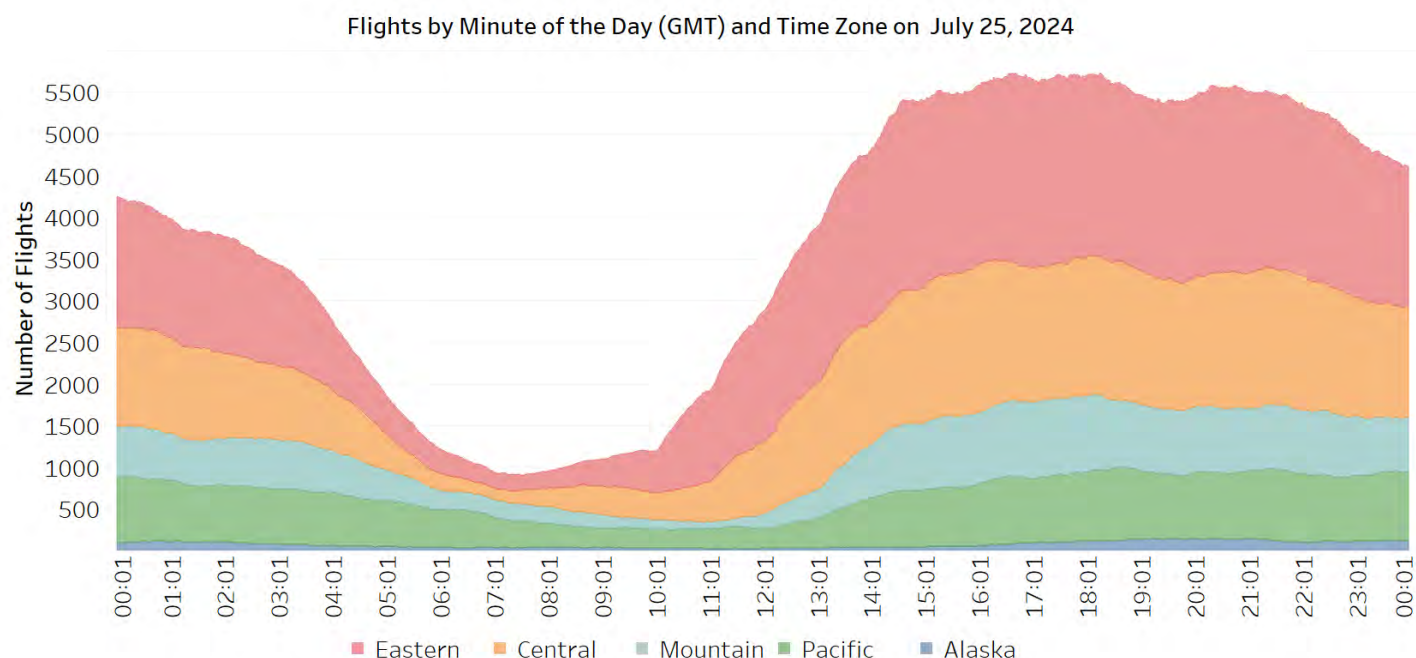

Flights by Minute of the Day (GMT) and Time Zone on July 25, 2024

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), January 16, 2025.

Average Hourly Capacity (Called Rate) at Core 30 Airports

In general, airport capacity is determined by its runways and surrounding airspace and FAA facilities continuously monitor and adjust these rates to reflect real-time airport capability. Here, hourly capacity is measured as the sum of the hourly called arrival and departure rates at airports, also known as "published rates," for reportable hours. Reportable hours represent the period in the day that captures the majority of the operations at an airport. In FY2024, the average hourly capacity across all Core 30 airports was 3,625. Prior to the pandemic, capacity averaged 3,699 operations per hour (table below).

In FY2024, the highest average hourly called rates were at Atlanta (ATL) and Chicago O'Hare (ORD). Each had an average called rate of over 200 operations per hour. The largest increases occurred at Honolulu (HNL) (up 4.2%), George Bush Intercontinental/Houston Airport (IAH) (up 4.4%) and Detroit Metropolitan Airport (DTW) (up 4.7%). The largest decrease occurred at Dallas Fort Worth (DFW) (down 11.3%) and Minneapolis St. Paul (MSP) (down 13.1%). Refer to Appendix II for the list of Core 30 Airports.
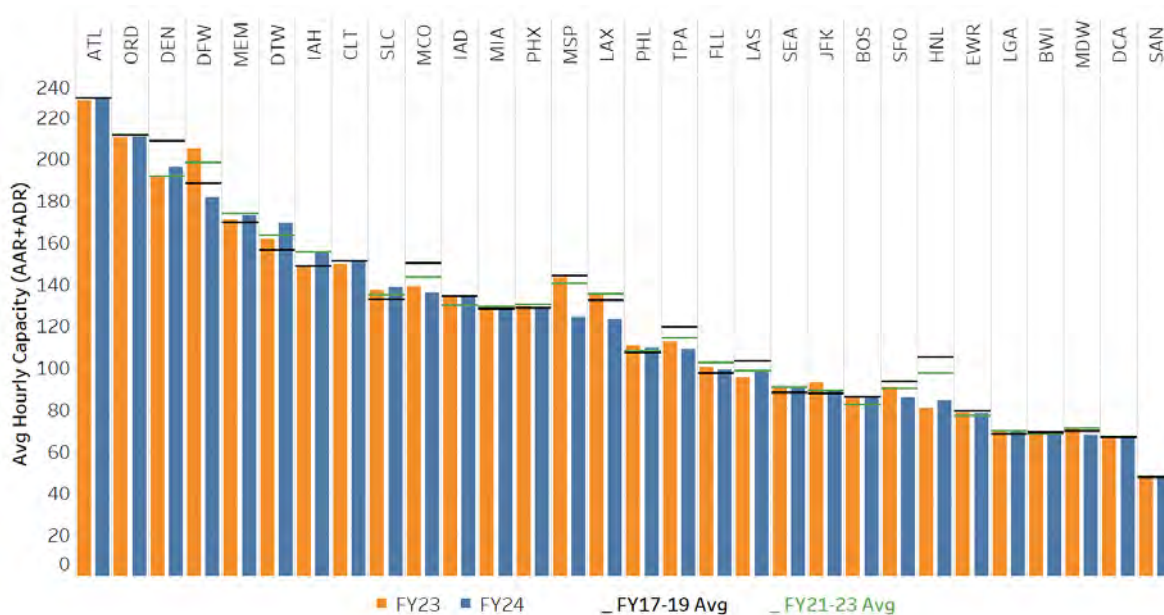
AHC Across All Core 30 Airports

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
3,699	3,689	3,670	3,625	-1.2%

Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24	Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	1	229	229	228	229	LAX	15	132	135	135	123
BOS	22	86	82	86	86	LGA	26	68	69	70	70
BWI	27	69	68	68	68	MCO	10	150	143	139	136
CLT	8	151	151	150	151	MDW	28	69	71	71	67
DCA	29	67	67	67	67	MEM	5	169	174	171	173
DEN	3	208	191	192	196	MIA	12	128	129	128	129
DFW	4	188	198	205	182	MSP	14	144	140	143	124
DTW	6	156	163	161	169	ORD	2	211	212	210	210
EWR	25	79	77	78	78	PHL	16	107	108	111	110
FLL	18	97	102	100	99	PHX	13	129	130	129	128
HNL	24	105	97	80	84	SAN	30	48	48	48	48
IAD	11	134	130	134	135	SEA	20	88	91	90	91
IAH	7	148	155	149	156	SFO	23	93	90	91	86
JFK	21	88	89	93	89	SLC	9	133	135	137	138
LAS	19	103	98	95	98	TPA	17	120	114	113	109

Ranked by FY24 daily capacity.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Aviation System Performance Metrics (ASPM), January 7, 2025

Average Daily Capacity (ADC) - Based on Called Rates at Core 30 Airports

Per requirements included in Section 214 of the FAA Modernization and Reform Act of 2012, the FAA publicly reports the Average Daily Capacity (ADC) metric. ADC is computed using the daily sum of hourly called arrival and departure rates at airports, also known as "published rates," for reportable hours. Reportable hours are intended to represent the busiest hours of the day for each airport. In general, airport capacity is determined by its runways and surrounding airspace and FAA facilities continuously monitor and adjust these rates to reflect real-time airport capability. In FY2024, ADC across all Core 30 airports was 60,412 arrivals and departures (table below).

In FY2024, data for the Core 30 airports show that the highest ADCs were found at Atlanta (ATL), Chicago (ORD), Dallas-Fort Worth (DFW), Memphis (MEM), and Denver (DEN); each with an average of over 2,900 operations per day or higher. Note, ADC is high for Memphis (MEM) because all 24 hours are reportable there. The largest decrease occurred at Dallas Fort Worth (DFW) and Minneapolis St. Paul (MSP). Refer to Appendix II for the list of Core 30 Airports.

ADC Across All Core 30 Airports

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
61,653	61,507	61,167	60,412	-1.2%

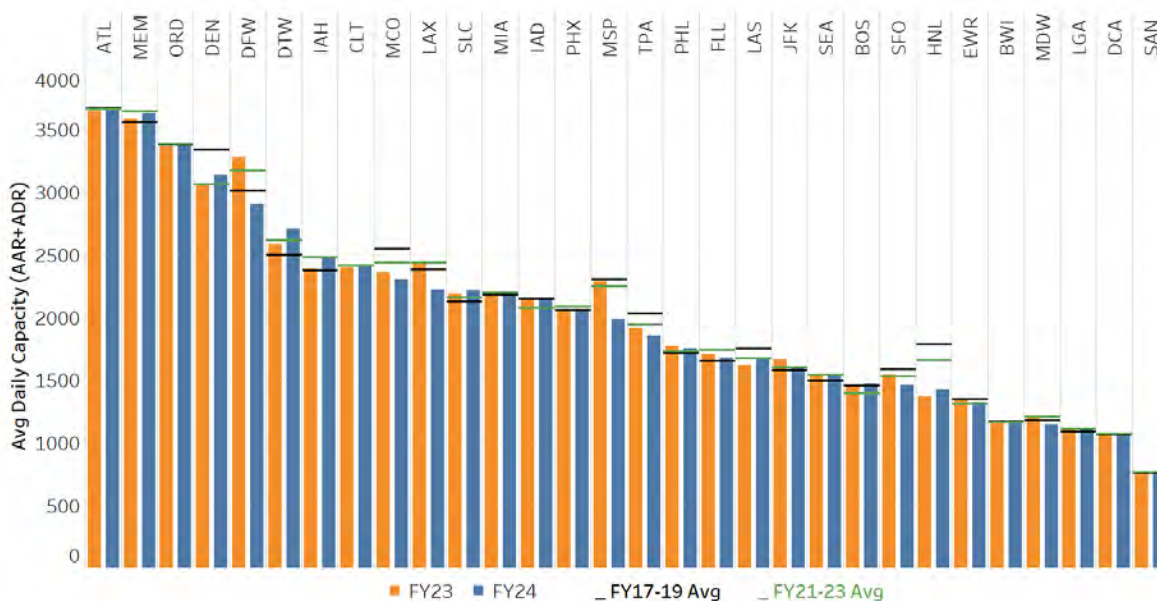| Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24	Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	1	3,664	3,663	3,642	3,666	LAX	10	2,379	2,436	2,426	2,219
BOS	22	1,460	1,397	1,458	1,469	LGA	28	1,093	1,111	1,121	1,114
BWI	26	1,171	1,163	1,161	1,152	MCO	9	2,547	2,435	2,360	2,304
CLT	8	2,414	2,413	2,395	2,412	MDW	27	1,181	1,205	1,208	1,147
DCA	29	1,068	1,071	1,074	1,066	MEM	2	3,556	3,645	3,583	3,627
DEN	4	3,335	3,061	3,065	3,132	MIA	12	2,180	2,198	2,180	2,185
DFW	5	3,009	3,169	3,275	2,904	MSP	15	2,302	2,245	2,286	1,987
DTW	6	2,500	2,614	2,581	2,702	ORD	3	3,376	3,384	3,358	3,364
EWR	25	1,349	1,311	1,333	1,324	PHL	17	1,712	1,728	1,768	1,752
FLL	18	1,655	1,740	1,703	1,677	PHX	14	2,057	2,085	2,066	2,048
HNL	24	1,787	1,656	1,368	1,425	SAN	30	762	767	773	764
IAD	13	2,147	2,078	2,144	2,152	SEA	21	1,498	1,541	1,529	1,541
IAH	7	2,375	2,482	2,384	2,489	SFO	23	1,585	1,533	1,540	1,456
JFK	20	1,580	1,604	1,666	1,595	SLC	11	2,123	2,158	2,189	2,215
LAS	19	1,754	1,673	1,617	1,673	TPA	16	2,032	1,942	1,914	1,851

Ranked by FY24 daily capacity.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Aviation System Performance Metrics (ASPM), January 7, 2025

Section 3. Operational Performance Metrics

The FAA uses a variety of operational performance metrics to measure efficiency of the NAS. This report presents the following operational metrics:

Delays

Diversions

Go-Arounds

Cancellations

Counts of NAS Delay at Core 30 Airports

Delays to instrument flight rules (IFR) traffic of 15 minutes or more, which result from the ATC system detaining an aircraft at the gate, short of the runway, on the runway, on a taxiway, or in an airborne holding configuration anywhere enroute, must be reported. The IFR controlling facility must ensure delay reports are received and entered into OPSNET. The charts that appear below are based on OPSNET numbers, ATO's official source for delay data. Many factors contribute to delay, with weather being the most frequently cited reason. Delays impose stress on the NAS, air traffic controllers, passengers, and the economy but are sometimes unavoidable in the safe operation of the NAS.

During FY2024, OPSNET data show that the number of Core 30 airport departure delays of at least 15 minutes rose significantly, by 13% to 173,207 (table below). Since FY2017-FY2019, before the pandemic began, Core 30 airport departure delays fell by 38.6% from 281,899. Compared to the post-pandemic average, FY2021-FY2023, departure delays fell by 22.9% from 224,776.

The graph and table below show, in FY2024, delays were highest at Las Vegas (LAS) and San Francisco (SFO), each with 23,000 or more delays. Together these two airports accounted for about 30% of all Core 30 airport delays. All but nine airports show decreases in delays since before the pandemic (LAS, Denver (DEN), Miami (MIA), Dallas Fort Worth (DFW), San Diego (SAN), Orlando (MCO), Honolulu (HNL), Tampa (TPA), and Minneapolis St. Paul (MSP)). Refer to Appendix II for the list of Core 30 Airports.
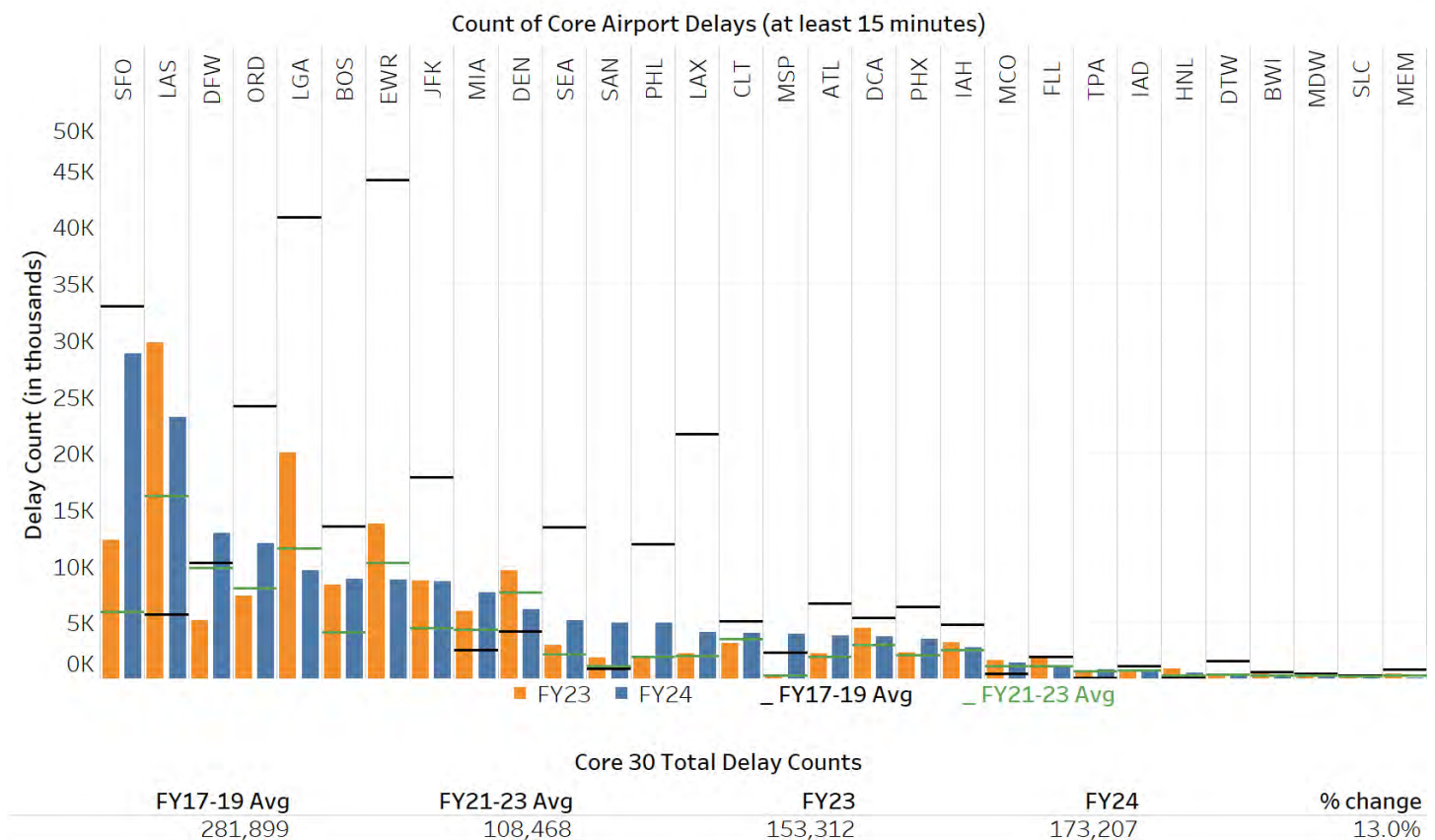
Count of Core Airport Delays (at least 15 minutes)

■ FY23 ■ FY24 _ FY17-19 Avg _ FY21-23 Avg

Core 30 Total Delay Counts

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% change
281,899	108,468	153,312	173,207	13.0%

Counts of NAS Delay at Core 30 Airports

Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24	Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	17	6,645	1,965	2,286	3,803	LAX	14	21,631	2,026	2,263	4,108
BOS	6	13,473	4,129	8,290	8,837	LGA	5	40,819	11,509	20,019	9,576
BWI	27	585	334	484	385	MCO	21	425	1,106	1,670	1,389
CLT	15	5,118	3,514	3,156	4,011	MDW	28	449	271	542	309
DCA	18	5,422	2,997	4,503	3,728	MEM	30	812	292	474	111
DEN	10	4,178	7,679	9,570	6,126	MIA	9	2,579	4,382	5,997	7,616
DFW	3	10,245	9,834	5,204	12,900	MSP	16	2,316	307	268	3,940
DTW	26	1,539	339	383	472	ORD	4	24,115	8,019	7,350	11,959
EWR	7	44,129	10,251	13,729	8,784	PHL	13	11,946	1,920	1,815	4,926
FLL	22	1,943	1,138	1,849	1,027	PHX	19	6,387	2,074	2,295	3,516
HNL	25	38	304	904	521	SAN	12	934	1,134	1,897	4,952
IAD	24	1,127	734	600	607	SEA	11	13,432	2,185	2,995	5,187
IAH	20	4,774	2,535	3,210	2,804	SFO	1	32,947	5,952	12,303	28,781
JFK	8	17,849	4,491	8,692	8,621	SLC	29	278	225	231	186
LAS	2	5,683	16,158	29,763	23,176	TPA	23	80	664	570	849

Ranked by FY24 delays.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), January 8, 2025.

Delays by Category

The two charts below show the sources of delays at Core 30 airports by type of delay.
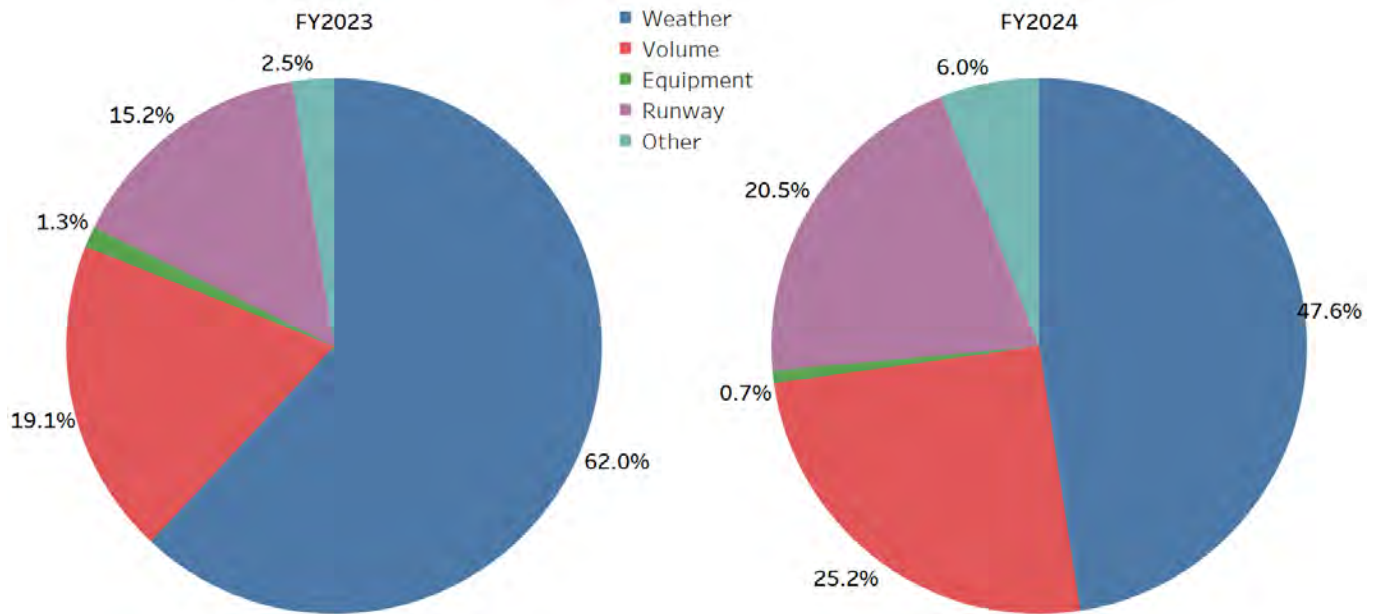
FY2023
- 2.5%
- 15.2%
- 1.3%
- 19.1%
- 62.0%

Legend:
- Weather
- Volume
- Equipment
- Runway
- Other

FY2024
- 6.0%
- 20.5%
- 0.7%
- 25.2%
- 47.6%

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), January 8, 2025.

Note: System impact delays are delays assigned to causal facilities in OPSNET and are composed of delays due to TMIs, departure delays, and airborne delays. System impact delays are also the basis for delays by class and delays by cause in OPSNET. (http://aspmhelp.faa.gov/index.php/OPSNET_Reports:_Definitions_of_Variables)

Diversions at Core 30 Airports

Diversions occur when a flight is rerouted to a different airport than its original destination. This usually occurs due to convective weather. Other less frequent reasons for diversions are medical emergencies, security, issues with the aircraft, or issues with passengers or crew members.

Diversions, grouped by intended destination, are reported below. Increases in the number of diversions can indicate capacity issues at the airport due to weather, construction, or volume. Overall Core 30 airports, the number of diversions decreased by 6.6% in FY2024; however, since before the start of the pandemic, Core 30 airport diversions fell by 24.1% from 17,779 (table below).

Airports with the highest increases in diversions were Chicago (ORD), Charlotte (CLT), Dulles (IAD), Philadelphia (PHL), and Honolulu (HNL). Airports with the highest decreases were Denver (DEN), Fort Lauderdale (FLL), Miami (MIA), Orlando (MCO), Las Vegas (LAS), and Los Angeles (LAX). Refer to Appendix II for the list of Core 30 Airports.

Original Destination Airport
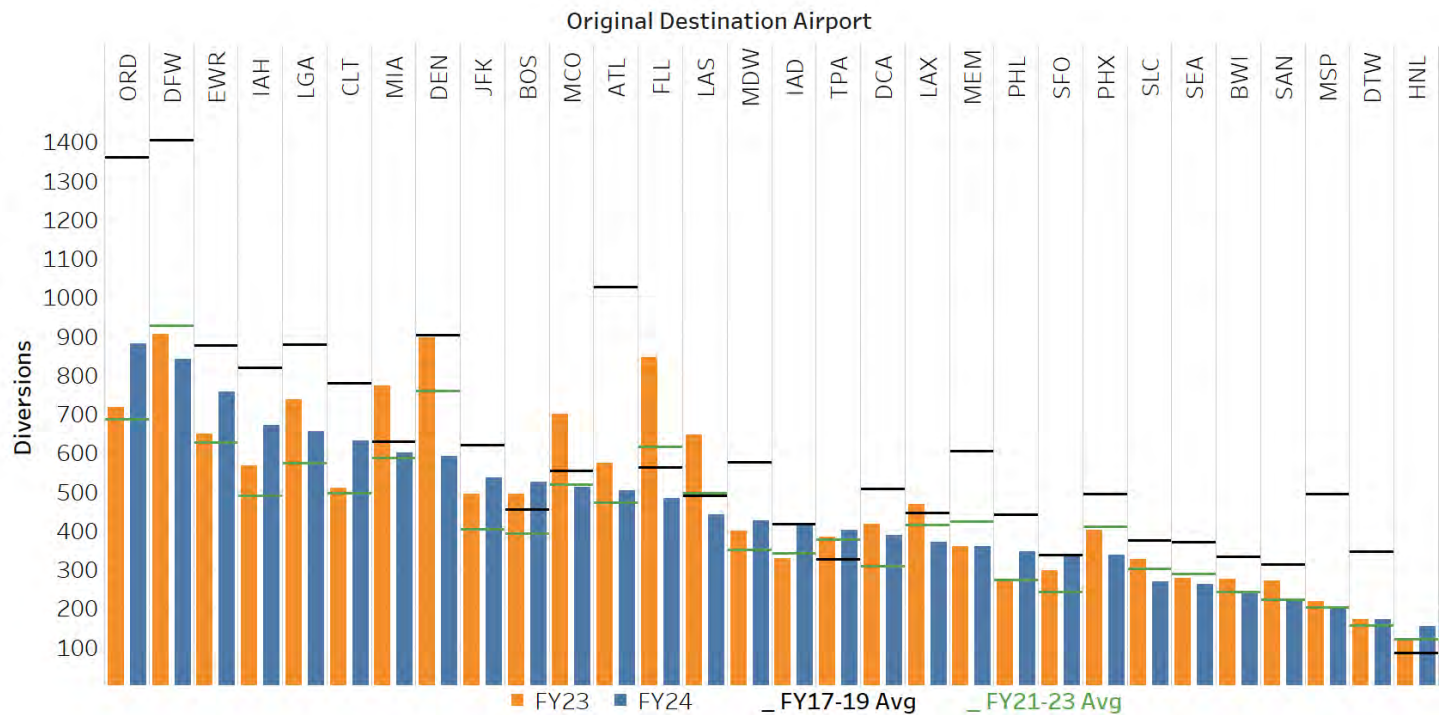
Core 30 Total Diversions

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
17,779	12,678	14,451	13,497	-6.6%

Diversions at Core 30 Airports

Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	3	1,025	472	572	502
BOS	22	454	391	492	524
BWI	27	331	241	273	243
CLT	9	778	495	508	629
DCA	20	507	306	415	387
DEN	4	902	757	895	591
DFW	1	1,404	926	904	839
DTW	26	344	155	170	171
EWR	7	874	624	647	756
FLL	12	562	615	845	481
HNL	30	85	119	115	153
IAD	17	415	340	327	416
IAH	5	819	488	566	669
JFK	11	618	403	492	534
LAS	14	488	495	646	439

Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
LAX	18	445	414	467	369
LGA	6	876	573	735	653
MCO	16	552	516	699	511
MDW	13	574	349	398	424
MEM	8	603	421	359	359
MIA	10	628	585	771	599
MSP	21	493	202	216	203
ORD	2	1,359	685	717	879
PHL	19	439	272	274	344
PHX	15	492	409	400	335
SAN	28	311	221	269	223
SEA	29	369	287	277	261
SFO	25	336	241	295	337
SLC	23	374	300	324	267
TPA	24	325	375	383	399

Ranked by FY24 diversions.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Aviation System Performance Metrics (ASPM), January 8, 2025.

Go-Arounds at Core 30 Airports

Go-Arounds are routine safety procedures where a pilot aborts a landing attempt and climbs back up to rejoin the queue to reattempt the landing. This occurs if the pilot or air traffic controller has any concerns about landing the aircraft safely. Go arounds can occur in situations where there is a sudden shift in the wind, there is an obstruction on the runway, or the aircraft inadvertently overshooting the runway for example.

Go-arounds as a percentage of arrival operations at each Core 30 airport (except Honolulu) appear below. Go-arounds are based on ASPM and CountOps data. In FY2024, average go-arounds as a percentage of arrivals across all Core 30 airports rose by 6.3% to about 0.41% of arrivals (tables and graph below). This occurred mainly due to a large increase in go-arounds relative to a smaller increase in arrival operations. Refer to Appendix II for the list of Core 30 Airports.
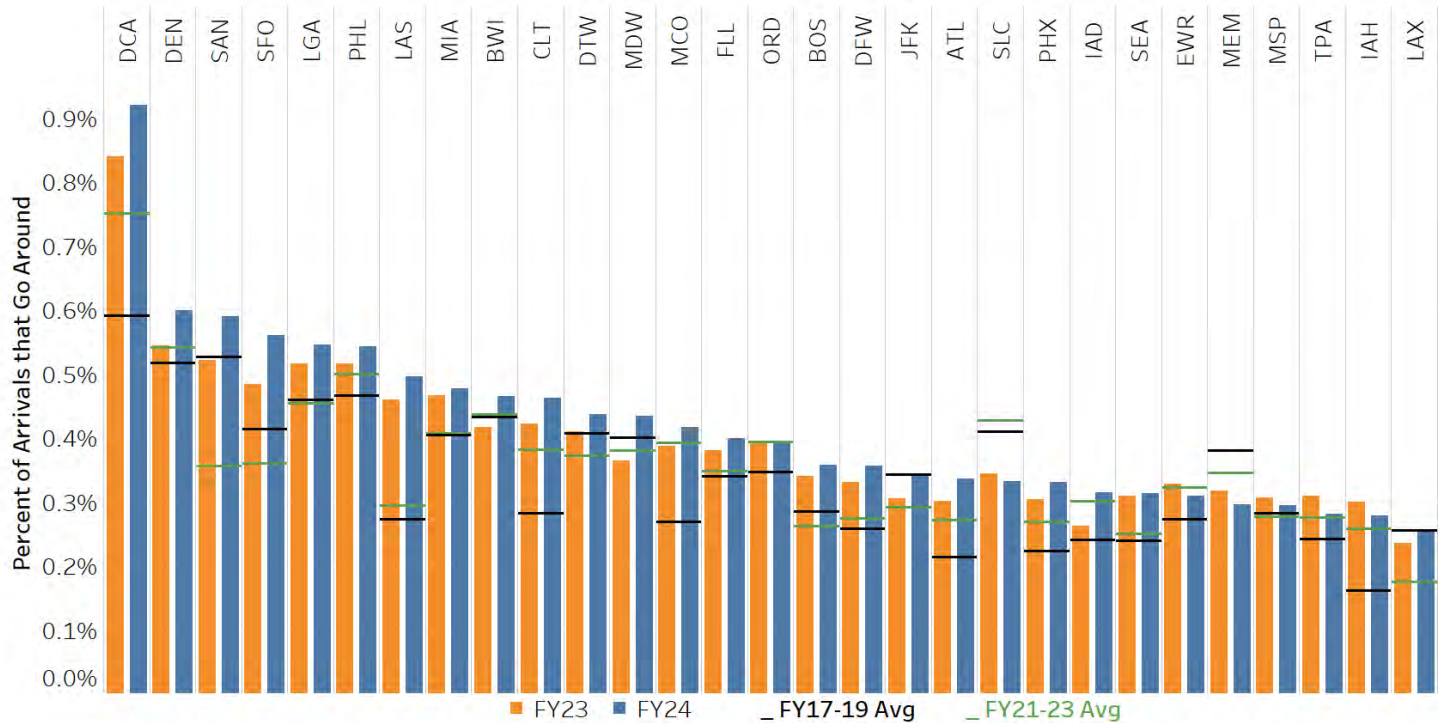
Core 30 Go Arounds as Percent of Arrivals

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
0.34%	0.36%	0.39%	0.42%	6.28%

Go-Arounds at Core 30 Airports

Airport	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	0.21%	0.27%	0.30%	0.34%
BOS	0.28%	0.26%	0.34%	0.36%
BWI	0.43%	0.44%	0.42%	0.46%
CLT	0.28%	0.38%	0.42%	0.46%
DCA	0.59%	0.75%	0.84%	0.92%
DEN	0.52%	0.54%	0.54%	0.60%
DFW	0.26%	0.27%	0.33%	0.36%
DTW	0.41%	0.37%	0.41%	0.44%
EWR	0.27%	0.32%	0.33%	0.31%
FLL	0.34%	0.35%	0.38%	0.40%
IAD	0.24%	0.30%	0.26%	0.31%
IAH	0.16%	0.26%	0.30%	0.28%
JFK	0.34%	0.29%	0.30%	0.34%
LAS	0.27%	0.29%	0.46%	0.50%

Airport	FY17-19 Avg	FY21-23 Avg	FY23	FY24
LAX	0.25%	0.18%	0.23%	0.26%
LGA	0.46%	0.45%	0.52%	0.55%
MCO	0.27%	0.39%	0.39%	0.42%
MDW	0.40%	0.38%	0.36%	0.43%
MEM	0.38%	0.35%	0.32%	0.30%
MIA	0.40%	0.41%	0.47%	0.48%
MSP	0.28%	0.28%	0.31%	0.29%
ORD	0.35%	0.39%	0.39%	0.39%
PHL	0.47%	0.50%	0.52%	0.54%
PHX	0.22%	0.27%	0.30%	0.33%
SAN	0.53%	0.36%	0.52%	0.59%
SEA	0.24%	0.25%	0.31%	0.31%
SFO	0.41%	0.36%	0.48%	0.56%
SLC	0.41%	0.43%	0.34%	0.33%
TPA	0.24%	0.28%	0.31%	0.28%

Excludes Honolulu (HNL)

Sources: Go-arounds: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Aviation System Performance Metrics (ASPM), January 8, 2025; Arrivals: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), CountOps, January 8, 2025.

Cancellations at Core 30 Airports

Cancellations can occur for numerous reasons due to weather, extensive delays in the system, air carrier crew or equipment issues, etc. Such reasons may not necessarily be under FAA's control and air carriers cancel their own flights in response to these issues. Since the DOT three-hour tarmac rule was imposed after 2010, more flights have been cancelled. This increase in cancellations means reductions in the number of recorded delays.

During FY2024, flight departure cancellations at Core 30 airports decreased by 22.7%, to 72,047 (table below).

The airports with the highest number of cancellations were Dallas Fort Worth (DFW), Newark (EWR), Houston (IAH), LaGuardia (LGA) and Chicago (ORD), each with over 4,000 (table and graph below). Together, cancellations at these airports account for over 33% of all cancellations. Refer to Appendix II for the list of Core 30 Airports.

Departure Airport — Total Cancellations bar chart (FY23, FY24, FY17-19 Avg, FY21-23 Avg)

Core 30 Total Cancellations				
FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
104,156	94,974	93,179	72,047	-22.7%

Cancellations at Core 30 Airports

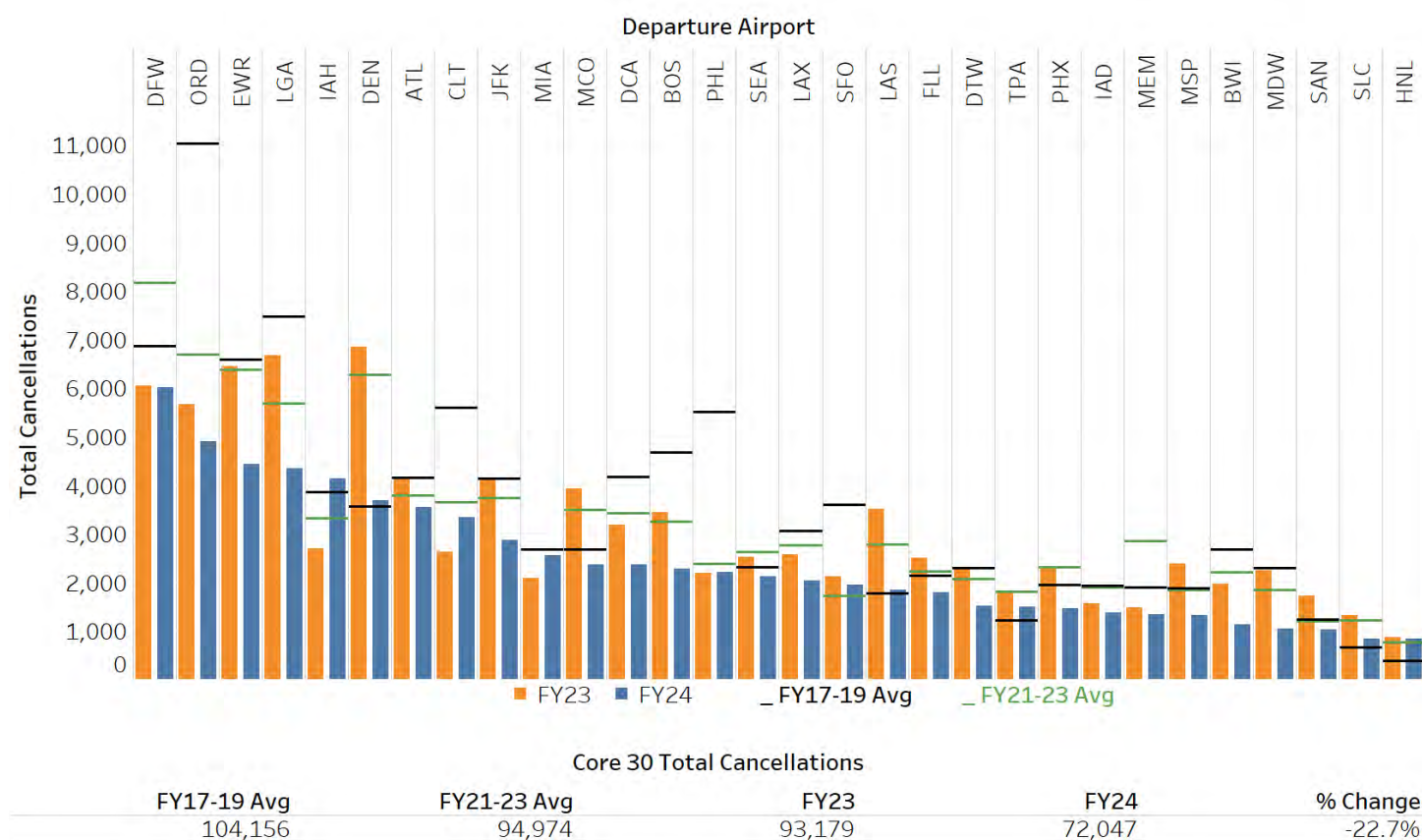| Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24	Facility	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	8	4,153	3,784	4,138	3,544	LAX	13	3,058	2,753	2,567	2,036
BOS	5	4,667	3,249	3,440	2,281	LGA	3	7,473	5,671	6,672	4,339
BWI	18	2,674	2,206	1,962	1,130	MCO	21	2,666	3,497	3,932	2,363
CLT	9	5,597	3,650	2,616	3,339	MDW	25	2,293	1,844	2,246	1,037
DCA	10	4,160	3,415	3,180	2,355	MEM	19	1,891	2,853	1,476	1,338
DEN	6	3,551	6,267	6,837	3,677	MIA	17	2,667	2,682	2,090	2,557
DFW	2	6,856	8,161	6,043	6,008	MSP	20	1,873	1,836	2,371	1,314
DTW	15	2,294	2,067	2,290	1,515	ORD	1	11,030	6,686	5,669	4,897
EWR	4	6,578	6,372	6,440	4,434	PHL	7	5,501	2,386	2,180	2,205
FLL	26	2,144	2,224	2,492	1,787	PHX	24	1,952	2,316	2,300	1,453
HNL	30	384	763	865	826	SAN	27	1,228	1,203	1,711	1,026
IAD	16	1,927	1,897	1,562	1,364	SEA	23	2,315	2,621	2,513	2,114
IAH	12	3,863	3,323	2,689	4,134	SFO	14	3,586	1,726	2,122	1,941
JFK	11	4,134	3,726	4,125	2,861	SLC	29	659	1,209	1,323	842
LAS	22	1,771	2,786	3,515	1,833	TPA	28	1,207	1,801	1,813	1,497

Ranked by FY24 cancellations.

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Aviation System Performance Metrics (ASPM), January 8, 2025.

Section 4. Traffic Management Initiatives

Traffic Management Initiatives (TMIs) are programs and tools that ATC may use to manage air traffic. These initiatives can take several forms, depending on the need and situation. Some TMIs are used to manage excess demand or a lowered acceptance rate at a particular airport. Other TMIs are used to manage traffic issues in the enroute environment usually caused by convective weather. The TMIs reported in this report include:

**Ground Delay Programs (GDP)**

Ground stops (GS)

Airspace Flow Programs (AFP)

Airborne Holding

Ground Delay Programs at Core 30 Airports

A ground delay program (GDP) is a TMI where aircraft are assigned an expected departure clearance time (EDCT) which slows the flow of arrivals into a capacity constrained airport. GDPs are airport-specific; therefore, each GDP is reported for a particular airport. During FY2024, GDPs increased 6.1% across all Core 30 airports, from 721 to 765. Before the pandemic (FY2017-2019), the average number of GDPs was 1,190 (table below). The post pandemic (FY2021-2023), the average number of GDPs was 505.

In FY2023, San Francisco (SFO), Newark (EWR), and LaGuardia (LGA) had the highest number of GDPs. Together, these three airports accounted for over 39% of all GDPs at Core 30 airports. Since before the pandemic (FY2017-2019), GDPs rose at nine Core 30 airports (LAS, DEN, FLL, CLT, MIA, MCO, MDW, TPA, and SLC (graph and table below). Refer to Appendix II for the list of Core 30 Airports.
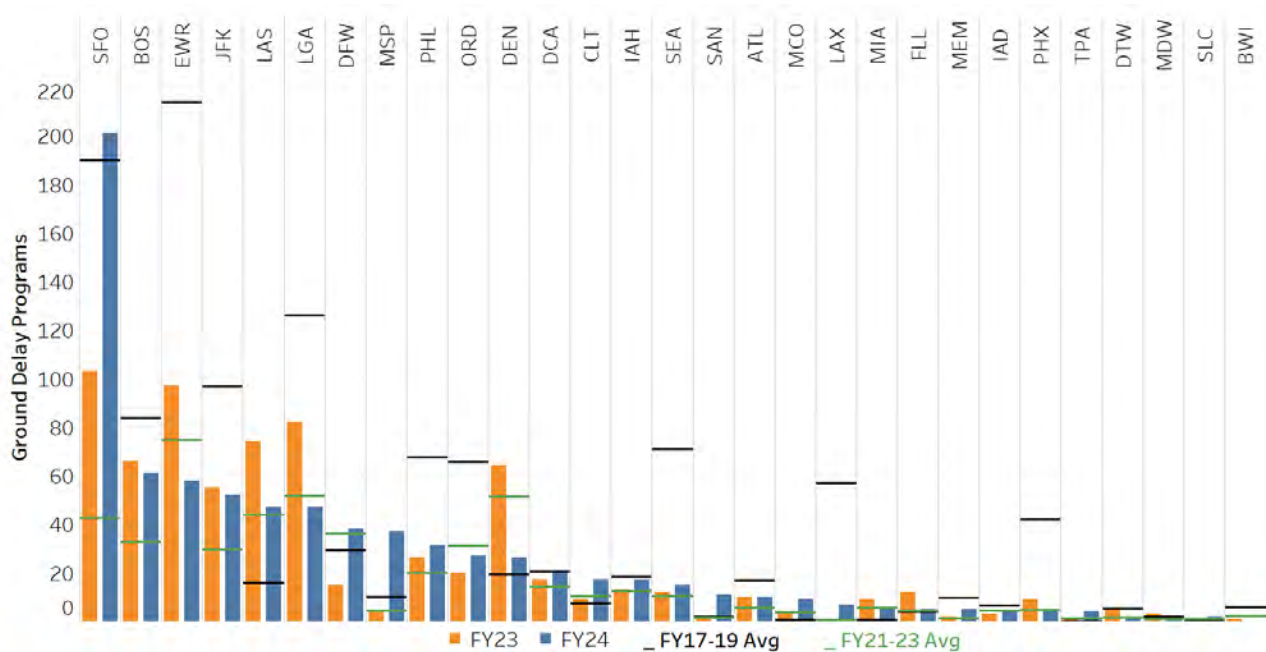
Total Core 30 GDPs

Avg FY17-19	Avg FY21-23	FY23	FY24	% Change
1,188	505	720	765	6.3%

AIRPORT	Avg FY17-19	Avg FY21-23	FY23	FY24	AIRPORT	Avg FY17-19	Avg FY21-23	FY23	FY24
ATL	17	6	10	10	LAX	57	1	1	7
BOS	84	33	66	61	LGA	126	52	82	47
BWI	6	2	1	0	MCO	1	4	4	9
CLT	7	10	9	17	MDW	2	1	3	2
DCA	21	14	17	20	MEM	10	1	2	5
DEN	19	51	64	26	MIA	1	6	9	6
DFW	29	36	15	38	MSP	10	4	4	37
DTW	5	2	5	2	ORD	66	31	20	27
EWR	214	75	97	58	PHL	68	20	26	31
FLL	4	4	12	5	PHX	42	5	9	4
IAD	7	4	3	4	SAN	2	2	2	11
IAH	18	12	13	17	SEA	71	10	12	15
JFK	97	30	55	52	SFO	190	43	103	201
LAS	16	44	74	47	SLC	0	1	1	2
					TPA	0	1	1	4

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), January 13, 2025.

Ground Stops at Core 30 Airports

Ground stops are the most restrictive form of TMI because they hold all aircraft, within the scope of the ground stop, at their departure airports until conditions at the destination airport allow for their arrival. Ground stops only affect arrivals to a specific airport (not departures) and, like GDPs, are airport specific. During FY2024, the number of ground stops decreased by 13% across all Core 30 airports, from 1,660 to 1,439. Before the pandemic (FY2017-2019), the average number of ground stops was 1,716 (table below). The post pandemic average (FY2021-2023) number of ground stops was 1,329.

During FY2024, LaGuardia (LGA), Newark (EWR), and Denver (DEN) had the highest number of ground stops (graph and table below). (Refer to Appendix II for the list of Core 30 Airports.) Since before the pandemic (FY2017-2019), ground stops rose at fifteen Core-30 airports.
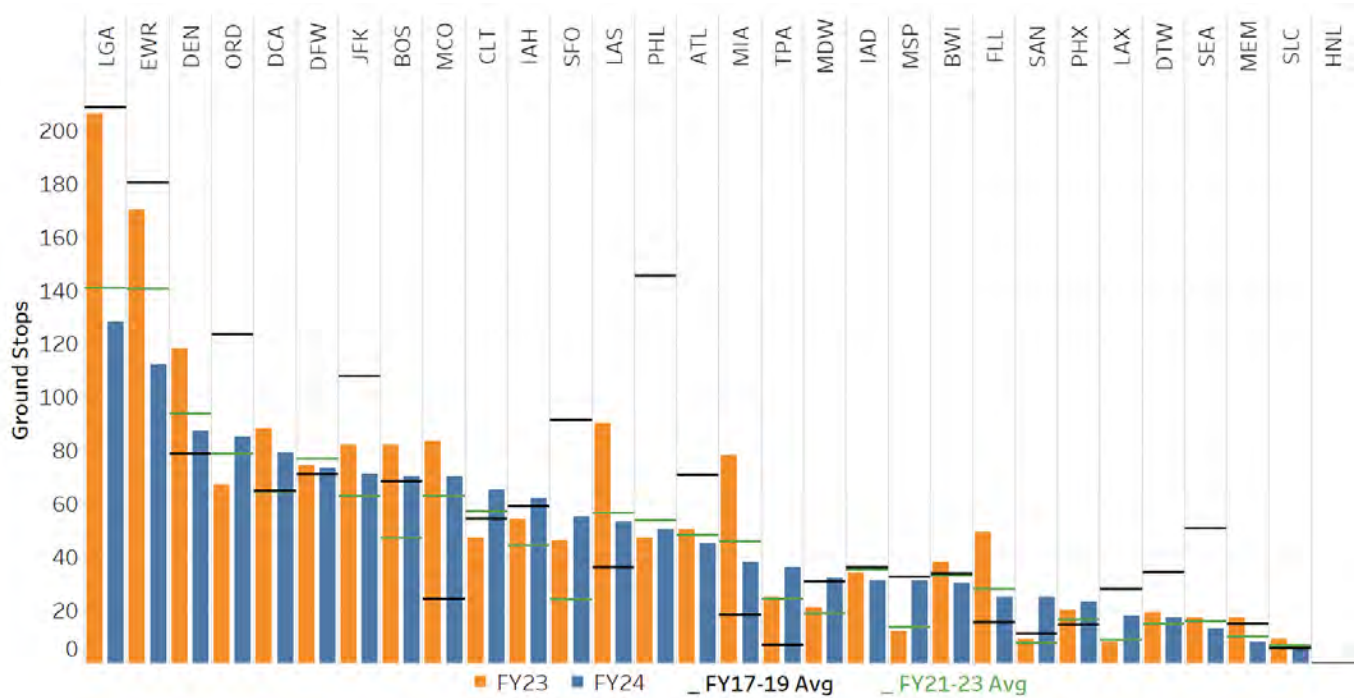
Total Core 30 Ground Stops

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
1,716	1,329	1,660	1,439	-13.3%

AIRPORT	FY17-19 Avg	FY21-23 Avg	FY23	FY24	AIRPORT	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	71	48	50	45	LAX	28	9	8	18
BOS	68	47	82	70	LGA	208	141	206	128
BWI	34	33	38	30	MCO	24	63	83	70
CLT	54	57	47	65	MDW	31	19	21	32
DCA	65	64	88	79	MEM	15	10	17	8
DEN	79	94	118	87	MIA	18	46	78	38
DFW	71	77	74	73	MSP	32	14	12	31
DTW	34	15	19	17	ORD	123	79	67	85
EWR	180	140	170	112	PHL	145	54	47	50
FLL	15	28	49	25	PHX	15	16	20	23
HNL	0	0	0	0	SAN	11	8	9	25
IAD	36	35	34	31	SEA	51	16	17	13
IAH	59	44	54	62	SFO	91	24	46	55
JFK	108	63	82	71	SLC	6	7	9	7
LAS	36	56	90	53	TPA	7	24	25	36

Airspace Flow Programs by Center

Imagine a line drawn in space in association with a constraint, usually convective weather. Under an airspace flow program, any flights filed that crosses the line (usually only in one direction) are assigned an expected departure clearance time (EDCT) by air traffic managers, to ensure that it arrives at the line, or "boundary," at a time when it can be accommodated. In FY2024, there were 186 airspace flow programs (AFP) imposed by air traffic managers versus 177 in FY2023, an increase of 5.1%. The main reasons for the 186 AFPs in FY2024 were weather conditions and traffic volume. Before the pandemic (FY2017-2019), the average number of AFPs was 140 (table below).

In FY2024, AFPs mainly affected Jacksonville (ZJX) and Miami (ZMA). Together, these centers accounted for 145 of the 186 AFPs. Since before the pandemic (FY2017-2019), the largest increase in AFPs occurred at Denver (ZDV) (graph and table below). These estimates are based on National Traffic Management Log (NTML) data. Refer to Appendix I for a list of facility codes.
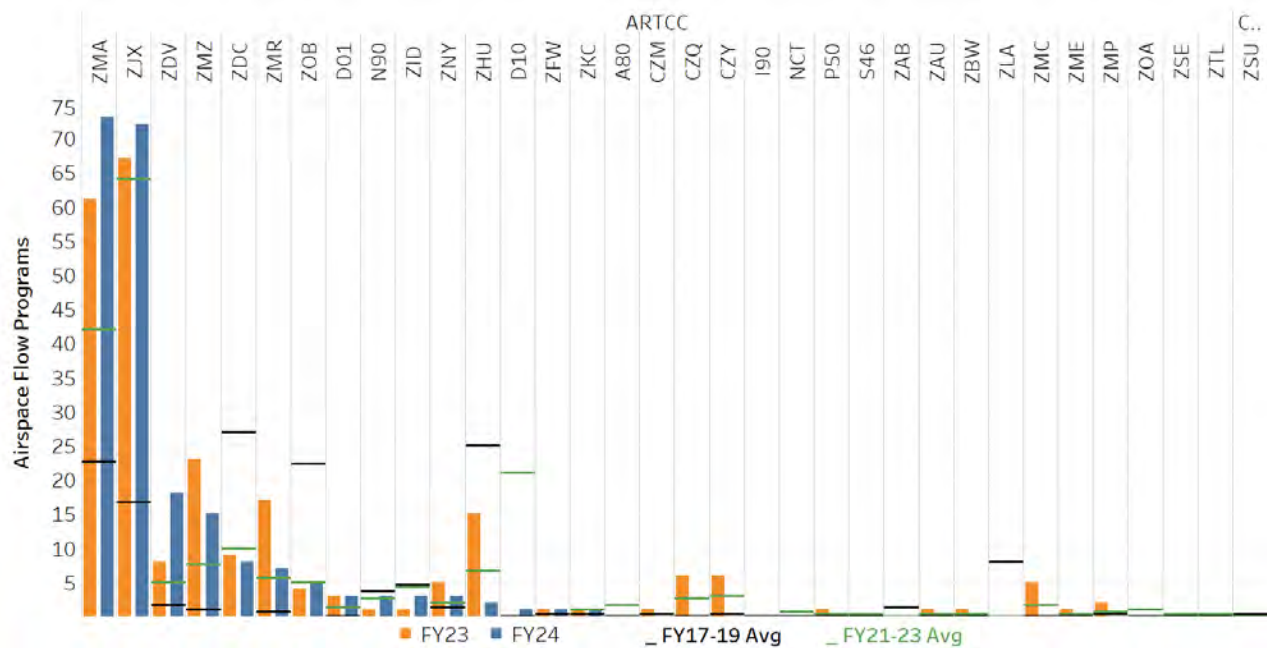
Total Centers Air Flow Programs

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
132	144	177	186	5.1%

Center	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ZAB	1	0	0	0
ZAU	0	0	1	0
ZBW	0	0	1	0
ZDC	27	10	9	8
ZDV	2	5	8	18
ZFW	0	0	1	1
ZHU	25	7	15	2
ZID	5	4	1	3
ZJX	17	64	67	72
ZKC	0	1	1	1
ZLA	8	0	0	0
ZMA	23	42	61	73
ZME	0	0	1	0
ZMP	0	1	2	0
ZNY	1	2	5	3
ZOA	0	1	0	0
ZOB	22	5	4	5
ZSE	0	0	0	0
ZTL	0	0	0	0

Source: Federal Aviation Administration, Air Traffic Organization, Technical Operations (AJW), National Traffic Management Log (NTML), February 25, 2025.

Airborne Holding by Center

Airborne holding occurs when an aircraft is deliberately delayed enroute by flying in a repeating rotational pattern. They are typically implemented when there is traffic congestion or convective weather at the destination airport or an adjacent facility. During FY2024, there were 30,021 airborne holdings, decreasing 3.8% from FY2023. Before the pandemic (FY2017-2019), the average number of airborne holdings was far higher at 37,105 (table below).

During FY2024, OPSNET data shows among Air Route Traffic Control Centers (ARTCC), the highest number of airborne holdings occurred in Miami (ZMA), DC (ZDC), Denver (ZDV), Jacksonville (ZJX), and Fort Worth (ZFW) (graph and table below). Airborne holdings among these five centers accounted for 48% of all airborne holding. Refer to Appendix I for a list of facility codes.
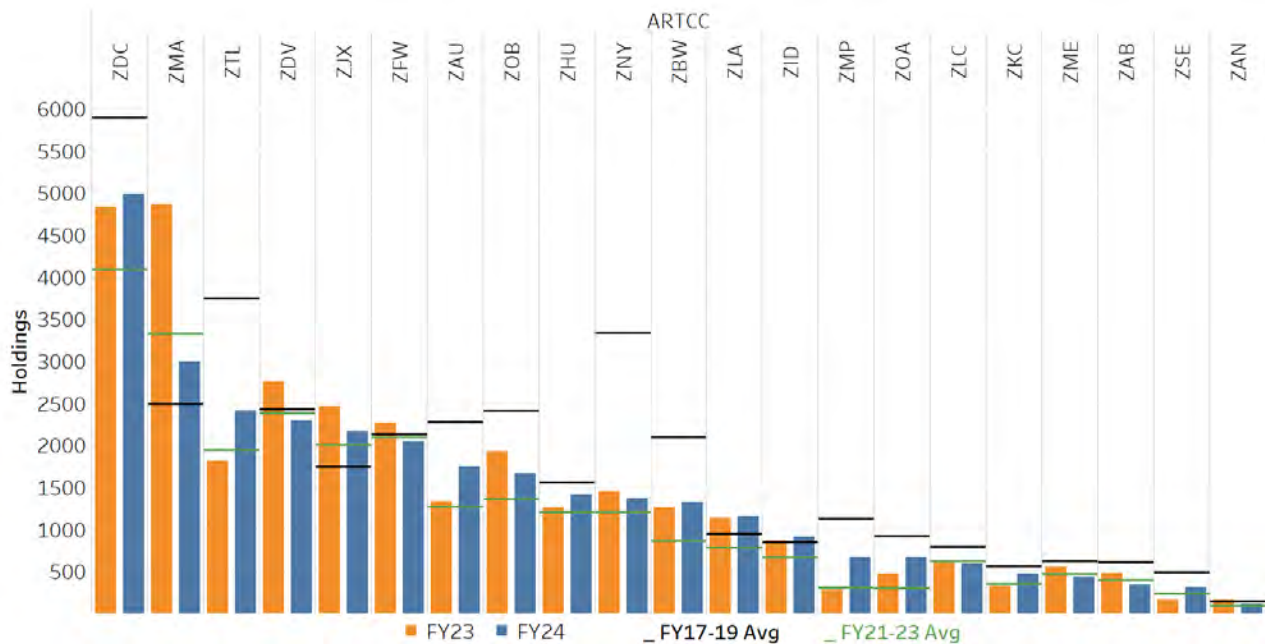
Total Center Flight Holdings

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
37,105	25,920	31,200	30,021	-3.8%

Centers	Rank	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ZAB	19	611	399	472	341
ZAN	21	146	87	159	108
ZAU	7	2,270	1,265	1,332	1,741
ZBW	11	2,093	861	1,256	1,319
ZDC	1	5,894	4,090	4,831	4,985
ZDV	4	2,427	2,379	2,757	2,292
ZFW	6	2,129	2,095	2,266	2,042
ZHU	9	1,552	1,204	1,258	1,412
ZID	13	846	662	863	910
ZJX	5	1,738	2,000	2,457	2,161
ZKC	17	553	353	323	470
ZLA	12	945	783	1,130	1,151
ZLC	16	789	618	604	596
ZMA	2	2,492	3,326	4,858	2,993
ZME	18	619	469	545	428
ZMP	14	1,122	302	280	664
ZNY	10	3,330	1,203	1,448	1,365
ZOA	14	912	299	469	664
ZOB	8	2,409	1,354	1,919	1,661
ZSE	20	482	230	160	308
ZTL	3	3,748	1,940	1,813	2,410

Rank by FY24 Holdings

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), January 8, 2025.

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Section 5. Safety Metrics

The U.S. national airspace system is the safest air transportation system in the world. This report presents metrics used to measure the safety of the NAS:
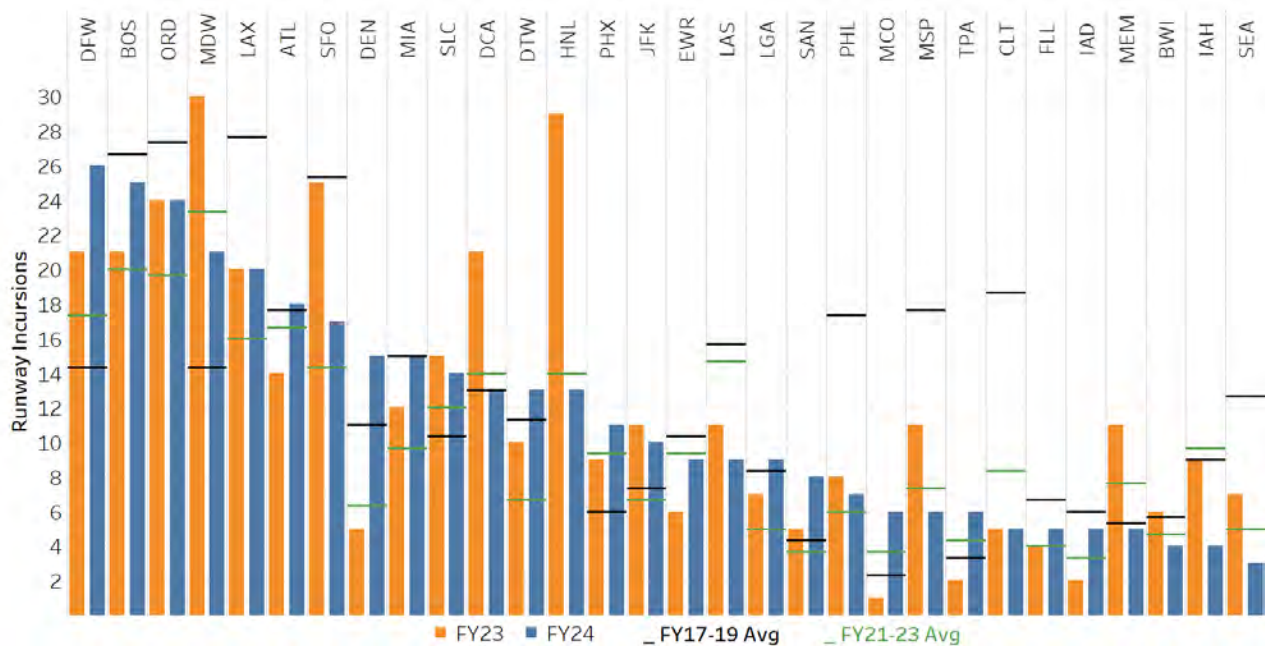
Runway Incursions

Incursions by Type

Loss of Standard Separation Count

Runway Incursions at Core 30 Airports

A runway incursion is any occurrence involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft. Across all Core 30 airports, the number of runway incursions decreased from 362 in FY2023 to 345 in FY2024. Before the pandemic (FY2017-2019), the average annual number of runway incursions was higher, at 391 (table below). After the pandemic (FY2021-2023), the average annual number of runway incursions was lower, at 308 (table below).

In FY2024, the highest numbers of runway incursions occurred at Dallas Fort Worth (DFW), Boston (BOS) and Chicago O'Hare (ORD). The number of runway incursions exceeded pre-pandemic levels at 12 airports, most notably at DFW (graph and table below). Incursions by airport and by type appear on the next page. Refer to Appendix II for the list of Core 30 Airports.

Legend: ■ FY23 ■ FY24 — FY17-19 Avg — FY21-23 Avg

Core 30 Total Runway Incursions

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
391	308	362	346	-4.4%

Facility	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ATL	18	17	14	18
BOS	27	20	21	25
BWI	6	5	6	4
CLT	19	8	5	5
DCA	13	14	21	13
DEN	11	6	5	15
DFW	14	17	21	26
DTW	11	7	10	13
EWR	10	9	6	9
FLL	7	4	4	5
HCF	21	5		
HNL		14	29	13
IAD	6	3	2	5
IAH	9	10	9	4
JFK	7	7	11	10
LAS	16	15	11	9

Facility	FY17-19 Avg	FY21-23 Avg	FY23	FY24
LAX	28	16	20	20
LGA	8	5	7	9
MCO	2	4	1	6
MDW	14	23	30	21
MEM	5	8	11	5
MIA	15	10	12	15
MSP	18	7	11	6
ORD	27	20	24	24
PHL	17	6	8	7
PHX	6	9	9	11
SAN	4	4	5	8
SEA	13	5	7	3
SFO	25	14	25	17
SLC	10	12	15	14
TPA	3	4	2	6

Source: Federal Aviation Administration, Air Traffic Organization, Safety and Technical Training, Office of Policy and Performance (AJI-3), unpublished Airborne Loss Event data, April 30, 2025.

Incursions by Type at Core 30 Airports, FY2024

Facility	A	B	C	D	E	Total
ATL			14	4		18
BOS			17	8		25
BWI			1	3		4
CLT			3	2		5
DCA			9	4		13
DEN			10	5		15
DFW			11	15		26
DTW			4	9		13
EWR			5	4		9
FLL		1	2	2		5
HNL			9	3	1	13
IAD			3	2		5
IAH			2	2		4
JFK			6	4		10
LAS			5	4		9
LAX			14	6		20
LGA			7	2		9
MCO			5	1		6
MDW			12	9		21
MEM			1	4		5
MIA			8	7		15
MSP			4	2		6
ORD			3	21		24
PHL			4	3		7
PHX			8	3		11
SAN			5	3		8
SEA			2	1		3
SFO			8	9		17
SLC		1	6	6	1	14
TPA			2	4		6

Category A - A serious incident in which a collision was narrowly avoided.
Category B - An incident in which separation decreases and there is a significant potential for collision, which may result in a time critical corrective/evasive response to avoid a collision.
Category C - An incident characterized by ample time and/or distance to avoid a collision.
Category D - An incident that meets the definition of a runway incursion such as incorrect presence of a single vehicle/person/aircraft on the protected area of a surface designated for the landing and take-off of aircraft of aircraft but with no immediate safety consequences.

Source: Federal Aviation Administration, Air Traffic Organization, Safety and Technical Training, Office of Policy and Performance (AJI-3), unpublished Airborne Loss Event data, April 30, 2025.

Loss of Standard Separation Count, by Center

Standard separation is a specified separation minima between airborne aircraft in controlled airspace. Breaches of such minima are based on airborne loss event data. Losses of standard separation are reported by Air Route Traffic Control Center (ARTCC). Across all centers, the number of losses of standard separation decreased from 1,026 in FY2024 to 679 in FY2024. Before the pandemic (FY2017-2019), the average annual number of losses of standard separation was higher at 1,221 (table below). After the pandemic (FY2021-2023), the average annual number of losses of standard separation was higher at 904. This means losses of standard separation are below pre- and post-pandemic levels.

In FY2024, the centers with the highest losses of standard of separation were Salt Lake City (ZLC), Albuquerque (ZAB), Chicago (ZAU) and Boston (ZBW). The number of losses of standard of separation exceeded pre-pandemic levels at six centers: Denver (ZDV), Salt Lake City (ZLC), Albuquerque (ZAB), Chicago (ZAU), Boston (ZBW) and Anchorage (ZAN) (graph and table below). Refer to Appendix I for a list of facility codes.
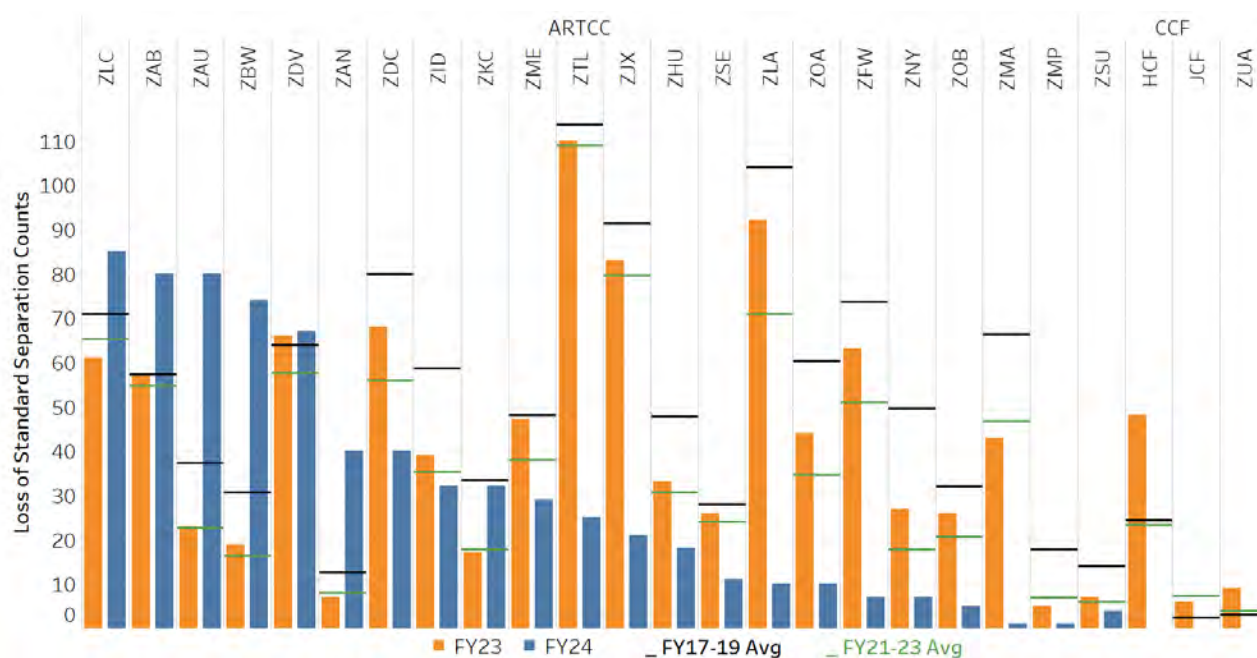
Total Losses of Standard Separation

FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
1,221	904	1,026	679	-33.8%

Center	FY17-19 Avg	FY21-23 Avg	FY23	FY24	Center	FY17-19 Avg	FY21-23 Avg	FY23	FY24
HCF	24	23	48	0	ZLA	104	71	92	10
JCF	2	7	6	0	ZLC	71	65	61	85
ZAB	57	55	57	80	ZMA	66	47	43	1
ZAN	13	8	7	40	ZME	48	38	47	29
ZAU	37	23	23	80	ZMP	18	7	5	1
ZBW	31	16	19	74	ZNY	50	18	27	7
ZDC	80	56	68	40	ZOA	60	35	44	10
ZDV	64	58	66	67	ZOB	32	21	26	5
ZFW	74	51	63	7	ZSE	28	24	26	11
ZHU	48	31	33	18	ZSU	14	6	7	4
ZID	59	35	39	32	ZTL	114	109	110	25
ZJX	91	80	83	21	ZUA	3	4	9	0
ZKC	33	18	17	32					

Source: Federal Aviation Administration, Air Traffic Organization, Safety and Technical Training, Office of Policy and Performance (AJI-3), unpublished Airborne Loss Event data, April 30, 2025.

Section 6. Other ATO Topics

There are a variety of other aspects of the NAS which are of special interest. This report presents the following:

Flight Service Stations

Commercial Space Launch Activity

Flight Service Stations

Flight services are delivered nationwide through certified professional controllers in Alaska and the contiguous United States, Hawaii, and Puerto Rico. Services include preflight weather briefings, flight planning, inflight advisory services, search and rescue (SAR), and processing Notices to Airmen (NOTAMs). Self-briefing and other automated services are provided through an online web portal. Web services include interactive graphical capabilities to view a wide range of weather and aeronautical information, flight planning, activating and closing flight plans, and more. Pilots may also access automated voice services to receive current and forecast conditions at specific airports, and receive updates for adverse conditions, including TFRs.

Flight Service also delivers the FAA Weather Camera Program. This program features an expanding network of over 400 camera sites in Alaska, Colorado, and Montana (other sites, including Hawaii) and over 200 sites hosted by NAV Canada, Canada's civil air navigation service provider. The weather cameras website provides pilots with additional information for improved situational awareness and decision-making. On the website, pilots can see current images at specific locations, compare the images to clear day views, or playback a loop of past images to establish weather trends. The website also delivers a variety of safety of flight information including adverse conditions, current and forecast conditions, pilot reports, and aeronautical information.

Alaska FSS	Barrow (BRW)
	Cold Bay (CDB)
	Deadhorse (SCC)
	Dillingham (DLG)
	Fairbanks (FAI)
	Homer (HOM)
	Illiamna (ILI) *
	Juneau (JNU)
	Kenai (ENA)
	Ketchikan (KTN)
	Kotzebue (OTZ)
	McGrath (MCG) *
	Nome (OME)
	Northway (ORT) *
	Palmer (PAQ)
	Sitka (SIT)
	Talkeetna (TKA)
Federal Contract FSS	Leidos FCFSS Fort Worth Hub (FTW)
	Leidos FCFSS Washington Hub (DCA)

* Seasonal Facility

FAA Flight Services

FAA Facilities - Alaska Flight Service

	Pilot Briefs	Flight Plans Filed	Preflight Calls	Aircraft Contacts	Airport Advisories	NOTAMs Issued	Total SAR
FY 2018	89,592	210,626	52,200	521,048	325,140	158,003	4,869
FY 2019	92,070	209,024	52,980	542,550	327,130	166,848	6,924
FY 2020	71,570	141,492	39,031	400,181	243,844	166,954	3,021
FY 2021	67,999	151,946	37,339	445,942	280,499	180,364	3,099
FY 2022	66,580	167,969	36,111	456,727	292,734	166,065	2,736
FY 2023	65,793	162,464	29,569	471,599	298,604	168,694	2,981
FY 2024	59,138	165,029	30,216	453,226	340,640	164,495	2,659

Federal Contract Flight Services

	Pilot Briefs	Flight Plans Filed	Preflight Calls	Inflight Contacts	Flight Data Calls	NOTAMs Issued	Total SAR
FY 2018	797,746	462,207	1,255,510	286,392	178,110	216,249	4,869
FY 2019	747,731	387,694	1,158,005	257,701	166,546	200,192	6,924
FY 2020	541,004	195,635	782,145	175,361	121,118	179,612	3,021
FY 2021	483,675	168,094	660,369	186,628	125,186	190,118	3,099
FY 2022	422,210	156,629	564,291	179,414	118,296	184,105	2,736
FY 2023	397,290	128,408	525,776	131,373	115,174	166,416	2,981
FY 2024	413,722	100,511	531,202	113,149	120,751	177,432	2,659

Web Services/DUATs

	Pilot Briefs	Flight Plans Filed
FY 2018	26,349,042	2,229,961
FY 2019	18,946,978	1,690,246
FY 2020	17,290,280	1,272,098
FY 2021	15,550,689	1,328,714
FY 2022	13,639,661	957,148
FY 2023	3,298,272	699,332
FY 2024	2,770,030	716,115

United States NOTAM Office (USNOF)

Year	Domestic	International
FY 2018	1,569,386	874,091
FY 2019	1,670,499	969,951
FY 2020	1,474,047	873,025
FY 2021	1,620,681	953,125
FY 2022	1,644,074	993,139
FY 2023	1,503,507	896,112
FY 2024	1,660,593	1,018,258

Sources: FAA, Air Traffic Organization, Flight Service (AJR-B), Email communication, February 7, 2025; FAA, Air Traffic Organization, U.S. NOTAM Office (AJV-A370), Calculations based on email communication, January 14, 2025.

Commercial Space Launch Activity

During CY2024, the FAA licensed 157 U.S. orbital commercial space launches. These launches were carried out by the following companies: SpaceX, 132 launches; Rocket Lab, 14; Stratolaunch, 2; Blue Origin, 4; Firefly, 1; United Launch Alliance, 2; and Virgin Galactic, 2. A graph showing annual numbers of commercial launches, by company, appears below.

U.S. Commercial Launch History
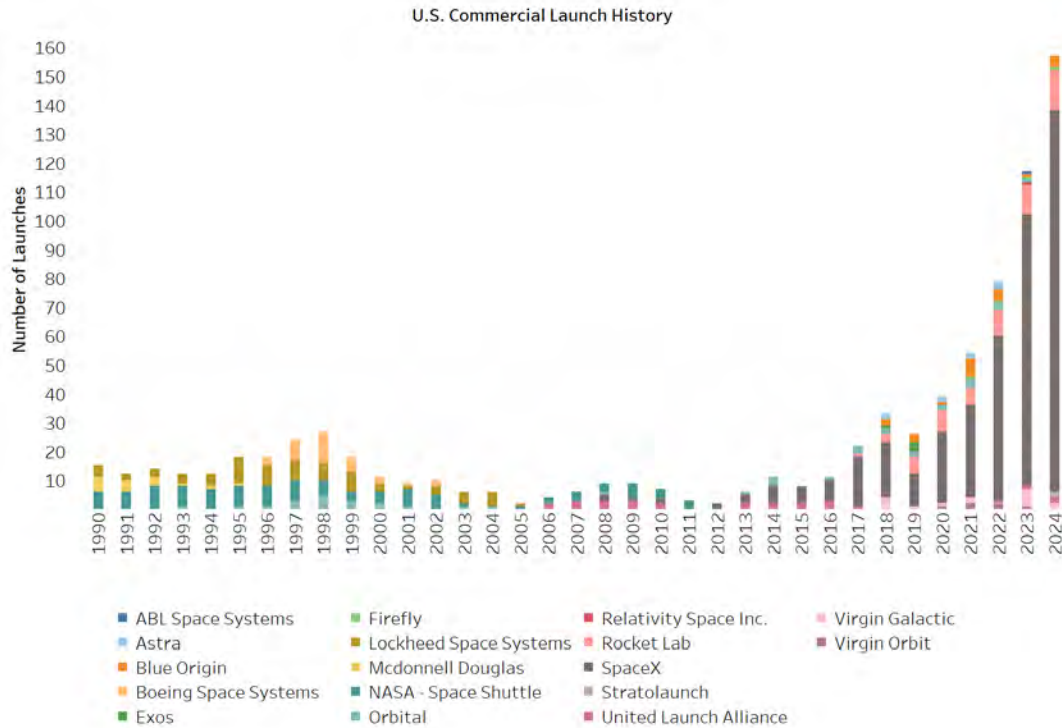
Note: A commercial launch is a launch that is internationally competed (i.e., available in principle to international launch providers) or whose primary payload is commercial in nature. FAA-licensed launches carrying captive government (NASA and DOD) or industry payloads are counted here. Data for 2018-2024 include launch failures and successes, and subspace and suborbital launches.

Sources:
Federal Aviation Administration (FAA), Commercial Space Transportation (AST), The Annual Compendium of Commercial Space Transportation, until 2018; FAA, Commercial Space Transportation (AST), https://www.faa.gov/data_research/commercial_space_data , as of January 14, 2025

U.S. Spaceports

U.S. commercial space launches may be carried out from FAA-licensed spaceports located throughout the country. As of January 14, 2025, there were 14 active FAA-licensed commercial spaceports. For a map of these locations, and to learn more about U.S. spaceports, please consult the FAA Office of Spaceports web page at: https://www.faa.gov/space/office_spaceports

Appendix I. Facility Codes

Federal ATCT

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

Code	Airport	Code	Airport	Code	Airport
ACK	Nantucket Memorial	GFK	Grand Forks Tower	PHF	Newport News/P Henry Int`l
ADS	Dallas Addison	GRR	Grand Rapids/Kent Co Int`l	PHX	Phoenix Sky Harbor Intl
ADW	Camp Springs/Andrews AFB	HEF	Manassas Rgnl/Davis Fld	PIA	Greater Peoria Regional
AFW	Ft Worth/Alliance	HIO	Portland-Hillsboro	PIE	St Petersburg Clearwater
AGC	Pittsburgh/Allegheny Cnty	HNL	Honolulu International	PNE	Northeast Philadelphia
ANC	Anchorage International	HOU	Houston Hobby	PNS	Pensacola Regional
APA	Denver/Centennial	HPN	White Plains/Westchester	POC	La Verne/Brackett Field
APC	Napa Tower	HWD	Hayward Air Terminal	POU	Poughkeepsie/Dutchess Co
ARB	Ann Arbor Municipal	IAD	Washington Dulles Int`l	PRC	Prescott/E A Love Field
ARR	Chicago/Aurora Municipal	IAH	Houston/G Bush Intercont`l	PSC	Pasco Tri Cities
ATL	Hartsfield-Jackson Atlanta Int`l	ILG	Wilmington/New Castle Cnty	PSP	Palm Springs Regional
BDL	Windsor Locks/Bradley Intl	ISP	Islip/Long Isl. MacArthur	PTK	Pontiac/Oakland Cnty Int`l
BED	Bedford/Hanscom Field	JFK	Kennedy Tower	PUB	Pueblo Memorial
BFI	Boeing Tower	JNU	Juneau International	PWK	Chicago/Palwaukee Muni
BJC	Denver/Jeffco	LAF	Lafayette/Purdue U	RHV	San Jose/Reid-Hillview
BOS	Boston/Logan International	LAN	Lansing/Capital City	RIC	Richmond International
BPT	Beaumont Port Arthur	LAS	Las Vegas/Harry Reid Int`l	RNO	Reno/Tahoe International
BUR	Burbank-Glendale-Pasadena	LAX	Los Angeles International	RVS	Tulsa/Riverside
BWI	Baltimore-Washington Int`l	LGA	La Guardia	SAN	San Diego Int`l/Lindbergh
CAK	Akron Canton Regional	LGB	Long Beach/Daugherty Field	SCK	Stockton Metropolitan
CCR	Concord/Buchanan Field	LNK	Lincoln Municipal	SDL	Scottsdale
CDW	Caldwell/Essex County	LOU	Louisville Bowman	SEA	Seattle Tacoma Int`l
CMA	Camarillo	LVK	Livermore Municipal	SEE	San Diego/Gillespie Field
CNO	Chino	MBS	Saginaw/MBS International	SFB	Orlando/Sanford
CPS	Cahokia/St Louis Downtown	MCO	Orlando International	SFO	San Francisco Int`l
CRQ	Carlsbad/McClellan Palomar	MDW	Chicago Midway	SJC	San Jose Tower
CSG	Columbus Metropolitan	MEM	Memphis Tower	SJU	San Juan International
DAL	Dallas Love Field	MFD	Mansfield Lahm Municipal	SLC	Salt Lake City Int`l
DAY	Dayton International	MHT	Manchester	SMF	Sacramento International
DCA	Washington National	MIC	Minneapolis/Crystal	SMO	Santa Monica Municipal
DEN	Denver International	MKC	Kansas City Downtown	SNA	Santa Ana/John Wayne
DFW	Dallas/Ft Worth Int`l	MKG	Muskegon County	SPI	Springfield/Capital
DPA	Chicago/Du Page	MMU	Morristown Tower	SRQ	Sarasota Bradenton
DTW	Detroit Metro Wayne Co	MRI	Anchorage/Merrill Field	STL	Lambert-St Louis Int`l
DVT	Phoenix-Deer Valley Muni	MRY	Monterey Peninsula	STP	St Paul Downtown
DWH	Tomball D W Hooks	MSP	Minneapolis-St Paul Int`l	STS	Santa Rosa Sonoma County
EMT	El Monte	MYF	San Diego/Montgomery Field	STT	St Thomas H S Truman
ERI	Erie International	NEW	New Orleans/Lakefront	SUS	Spirit of St Louis
EWR	Newark Tower	OAK	Oakland Tower	TEB	Teterboro
FCM	Flying Cloud Tower	OGG	Maui/Kahului	TMB	Miami/Kendall-Tamiami Exec
FFZ	Mesa/Falcon Field	OMA	Omaha	TOA	Torrance/Zamperini Field
FLL	Ft Lauderdale/Hollywood	ONT	Ontario International	TUS	Tucson International
FNT	Flint Tower	ORD	Chicago/O`Hare Int`l	TVC	Traverse City
FPR	Fort Pierce	ORL	Orlando Executive, FL ATCT Tower	VGT	North Las Vegas
FRG	Farmingdale/Republic	PAE	Everett Paine Field	VNY	Van Nuys
FTW	Fort Worth Meacham	PAO	Palo Alto	VRB	Vero Beach
FXE	Fort Lauderdale Executive	PDK	Atlanta/Dekalb-Peachtree	YIP	Detroit Willow Run
GCN	Grand Canyon Municipal	PDX	Portland International		

Contract ATCT

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

Code	Airport	Code	Airport	Code	Airport	Code	Airport
ABY	Albany/SW GA Regional	EYW	Key West International	JQF	Concord Regional	PIH	Pocatello Regional
ADM	Ardmore Municipal	FDK	Frederick Municipal	JRF	Kalaeloa Arpt	PKB	Parkersburg/Wood County
ADQ	Kodiak	FIN	Flagler Tower	JVL	Janesville/Rock County	PMD	Palmdale
AEG	Double Eagle II	FLG	Flagstaff-Pulliam	JWN	Nashville/John C Tune	PMP	Pompano Beach Airpark
AEX	Alexandria International	FMN	Farmington/4 Corners Rgnl	JXN	Jackson Cnty-Reynolds Fld	PVU	Provo Municipal
AHN	Athens/Ben Epps	FMY	Fort Myers/Page Field	JYO	Leesburg Executive Airport	PWA	Oklahoma City/Wiley Post
AKN	King Salmon Tower	FNL	Ft Collins-Loveland Muni	KOA	Kailua/Kona International	RAL	Riverside Municipal
ALN	Alton/St Louis Regional	FOE	Topeka/Forbes Field	LAL	Lakeland/Linder Regional	RAP	Rapid City Regional
ALW	Walla Walla Regional	FOK	Suffolk Tower	LAW	Lawton Municipal	RBD	Dallas Redbird
ANE	Minneapolis/Anoka Cnty	FTY	Atlanta/Fulton County	LBE	Latrobe	RDD	Redding
APF	Naples Municipal	FUL	Fullerton Municipal	LEB	Lebanon Municipal	RDM	Redmond/Roberts Field
ARA	New Iberia/Acadiana Rgnl	FWS	Fort Worth Spinks	LEE	Leesburg Municipal	RME	Rome
ASG	Springdale Municipal	FYV	Fayetteville/Drake Field	LIH	Lihue	RNM	Ramona Airport
ASH	Nashua/Boire Field	GCK	Garden City	LMT	Klamath Falls Int'l	RNT	Renton Municipal
ATW	Appleton/Outagamie County	GEU	Glendale Municipal	LNS	Lancaster	ROG	Rogers
BAF	Westfield/Barnes Municipal	GJT	Grand Junction/Walker Fld	LOT	Lockport Lewis	RYN	Tucson/Ryan Field
BAK	Columbus Municipal	GKY	Arlington Municipal	LRD	Laredo International	RYY	Marietta/Cobb County
BAZ	New Braunfels Municipal	GLH	Greenville/Mid Delta Rgnl	LSE	La Crosse Municipal	SAC	Sacramento Executive
BBG	Branson Tower	GLS	Galveston	LUK	Cincinnati/Lunken Field	SAF	Santa Fe Municipal
BCT	Boca Raton	GMU	Greenville Downtown	LWB	Greenbrier Tower	SAW	Marquette Sawyer AFB
BDR	Bridgeport/Sikorsky Mem	GNV	Gainesville Regional	LWM	Lawrence Municipal	SBD	San Bernardino Intl Tower
BET	Bethel	GON	Groton-New London	LWS	Lewiston/Nez Perce Cnty	SBP	San Luis Obispo
BFM	Mobile Downtown	GPI	Glacier Park Intl (FCA-Kalispell)	LYH	Lynchburg Regional	SBY	Salisbury/OC Wicomico Rgnl
BKL	Lakefront Tower	GPM	Grand Prairie Tower	LZU	Lawrenceville/Gwinnett Cty	SDM	San Diego/Brown Fld Muni
BKV	Brooksville Tower	GRI	Grand Isl./Central NE Rgnl	MCN	Macon/Middle GA Regional	SFF	Spokane/Felts Field
BLI	Bellingham International	GSN	Saipan International	MDH	Carbondale/Southern IL	SGJ	St Augustine
BMG	Bloomington/Monroe Cnty	GTR	Golden Triangle Regional	MEI	Meridian/Key Field	SGR	Sugarland
BMI	Bloomington/Central IL Rgn	GTU	Georgetown	MER	Atwater/Castle AFB	SIG	San Juan/F L R Dominicci
BQN	Ramey AFB	GUM	Agana/Guam International	MFE	Mc Allen/Miller Int'l	SJT	San Angelo/Mathis Field
BRO	Brownsville/S Padre Island	GYH	Greenville/Donaldson Cntr	MFR	Medford/Rogue Valley Int'l	SLE	Salem/Mc Nary Field
BTL	Battle Creek/Kellogg	GYI	North Texas Regional	MGW	Morgantown Municipal	SLN	Salina Municipal
BVY	Beverly Municipal	GYR	Phoenix-Goodyear Municipal	MHK	Manhattan	SMX	Santa Maria/Hancock Field
BZN	Bozeman/Gallatin Field	GYY	Gary Regional	MHR	Sacramento/Mather	SNS	Salinas Municipal
CFO	Colorado Air and Space Port Arpt	HDC	Hammond Muni Arpt	MIE	Muncie/Delaware County	SPG	St Petersburg/A Whitted
CGF	Cleveland Cuyahoga County	HFD	Hartford-Brainard	MKK	Kaunakakai/Molokai	SQL	San Carlos
CHD	Chandler Municipal	HGR	Hagerstown/WA Cnty Rgnl	MKL	Jackson/McKellar-Sipes Rgn	SSF	San Antonio/Stinson Field
CHO	Charlottesville Albemarle	HHR	Hawthorne Mun/Northrop Fld	MLB	Melbourne International	STC	St Cloud Municipal
CIC	Chico	HKS	Jackson/Hawkins Field	MOD	Modesto/City-County	STJ	St Joseph/Rosecrans Mem
CLL	College Station Tower	HKY	Hickory Regional	MOT	Minot International	STX	Christiansted (St Croix)
CNW	Waco James Connally	HLG	Wheeling/OH County	MQY	Smyrna	SUA	Stuart/Witham Field

Contract ATCT

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

Code	Airport	Code	Airport	Code	Airport	Code	Airport
COU	Columbia Regional	HND	Henderson ATCT	MSO	Missoula International	SUN	Hailey/Friedman Memorial
CRE	North Myrtle Beach	HOB	Hobbs/Lea County	MTN	Baltimore/Martin State	SWF	Newburgh/Stewart Int`l
CRG	Jacksonville/Craig Muni	HQZ	Mesquite/P L Hudson Muni	MVY	Martha`s Vineyard	SWO	Stillwater Municipal
CWA	Mosinee/Central WI	HRL	Harlingen/Valley Int'l	MWA	Marion/Williamson Cty Rgnl	TCL	Tuscaloosa Municipal
CWF	Lake Charles/Chennault	HSA	Bay St Louis/Stennis Intl	MWC	Milwaukee/LJ Timmerman	TIW	Tacoma Narrows
CXO	Conroe	HUM	Houma-Terrebonne	NQA	Millington Municipal	TIX	Titusville/Space Coast Rgn
CXY	Harrisburg/Capital City	HUT	Hutchinson Municipal	OAJ	Albert J Ellis Airport	TKI	McKinney Municipal
CYS	Cheyenne	HVN	New Haven/Tweed	OCF	Ocala Airport	TOP	Topeka/P Billard Municipal
DBQ	Dubuque Regional	HWO	Hollywood/North Perry	OGD	Ogden/Hinckley	TTD	Portland-Troutdale
DEC	Decatur	HXD	Hilton Head Island	OJC	Olathe/Johnson Cnty Exec	TTN	Trenton Mercer
DET	Detroit City	HYA	Hyannis	OLM	Olympia	TUP	Tupelo Regional
DHN	Dothan	HYI	San Marcos	OLV	Olive Branch	TXK	Texarkana Regional
DTN	Shreveport Downtown	IAG	Niagara Falls Int'l	OMN	Ormond Beach Municipal	TYR	Tyler Pounds Field
DTO	Denton	IDA	Idaho Falls/Fanning Field	OPF	Miami/Opa Locka	TZR	Columbus/Bolton Field
DTS	Destin/Ft Walton Beach	IFP	Laughlin/Bullhead Int'l	ORH	Worcester Regional	UAO	Aurora State
DXR	Danbury Municipal	INT	Winston Salem	OSH	Oshkosh/Wittman Regional	UES	Waukesha County
EAU	Eau Claire	IPT	Williamsport Regional	OSU	Columbus/OH State U	UGN	Chicago/Waukegan Regional
ECP	Panama City Tower	ISM	Orlando/Kissimmee Muni	OTH	Southwest Oregon Regional	UNV	University Park Airport
EDC	Austin Executive Airport	ISO	Kinston Regional	OUN	Norman/U of OK Westheimer	VCT	Victoria Regional
EGE	Eagle County Regional	ITH	Ithaca/Tompkins County	OWB	Owensboro/Daviess Cnty	VCV	Victorville Tower
ENA	Kenai Municipal	IWA	Phoenix/Williams Gateway	OWD	Norwood Memorial	VQQ	Jacksonville/Cecil Field
ENW	Kenosha Regional	IXD	Olathe/New Century Aircntr	OXC	Waterbury-Oxford	WDG	Enid Woodring Municipal
ESN	Easton/Newnam Field	JAC	Jackson/J Hole	OXR	Oxnard	WHP	Los Angeles/Whiteman
EVB	New Smyrna Beach Municipal	JEF	Jefferson City Memorial	PAH	Paducah/Barkley Regional	WJF	Lancaster/Gen Fox Airfield
EWB	New Bedford Regional	JKA	Gulf Shores/J Edwards	PDT	Pendleton/Eastern OR Rgnl	XNA	Northwest Arkansas Tower
EWN	New Bern/Craven Co Rgnl	JLN	Joplin Regional	PGD	Punta Gorda	YKM	Yakima Air Terminal

Air Route Traffic Control Centers (ARTCC)

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

LocID	Center	LocID	Center
ZAB	Albuquerque NM ARTCC	ZLA	Los Angeles CA ARTCC
ZAN	Anchorage AK ARTCC	ZLC	Salt Lake City UT ARTCC
ZAU	Chicago IL ARTCC	ZMA	Miami FL ARTCC
ZBW	Nashua NH ARTCC (Boston)	ZME	Memphis TN ARTCC
ZDC	Leesburg VA ARTCC (DC)	ZMP	Minneapolis MN ARTCC
ZDV	Denver CO ARTCC	ZNY	New York NY ARTCC
ZFW	Fort Worth TX ARTCC	ZOA	Oakland CA ARTCC
ZHU	Houston TX ARTCC	ZOB	Cleveland OH ARTCC
ZID	Indianapolis IN ARTCC	ZSE	Seattle WA ARTCC
ZJX	Jacksonville FL ARTCC	ZTL	Atlanta GA ARTCC
ZKC	Kansas City KS ARTCC		

Combined Control Facilities (CCF)

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

LocID	Center
HCF	Honolulu Control Facility
ZSU	San Juan PR CERAP
JCF	Joshua Control Facilty
ZUA	Guam CERAP

Stand-Alone Terminal Radar Control (TRACON) Facilities

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

LocID	TRACON	LocID	TRACON
A11	Anchorage TRACON	P31	Pensacola TRACON
A80	Atlanta TRACON	P50	Phoenix TRACON
A90	Boston TRACON	P80	Portland TRACON
C90	Chicago TRACON (Elgin)	R90	Omaha TRACON
D01	Denver TRACON	S46	Seattle/Tacoma TRACON
D10	Dallas/Ft Worth TRACON	S56	Salt Lake City TRACON
D21	Detroit TRACON	T75	St Louis TRACON
F11	Central Florida TRACON	U90	Tucson TRACON
I90	Houston TRACON	Y90	Yankee TRACON (Bradley)
L30	Las Vegas TRACON	N90	New York TRACON
M03	Memphis TRACON	PCT	Potomac TRACON
M98	Minneapolis TRACON	SCT	Southern California TRACON
NCT	Northern California TRACON		

Combined TRACONs

Source: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET)

LocID	TRACON	LocID	TRACON	LocID	TRACON
ABE	Allentown/Lehigh Valley	DSM	Des Moines International	MLI	Moline/Quad City Int`l
ABI	Abilene Tower	ELM	Elmira/Corning Regional	MLU	Monroe Regional
ABQ	Albuquerque International	ELP	El Paso International	MOB	Mobile Regional
ACT	Waco Tower	EUG	Eugene/M Sweet Field	MSN	Madison/Dane Cnty Regional
ACY	Atlantic City Int`l	EVV	Evansville Regional	MSY	New Orleans Int`l/Moisant
AGS	Augusta/Bush Field	FAI	Fairbanks Tower	MWH	Moses Lake/Grant Co Int`l
ALB	Albany County	FAR	Fargo/Hector International	MYR	Myrtle Beach International
ALO	Waterloo Municipal	FAT	Fresno Yosemite Int`l	OKC	Oklahoma City/Will Rogers
AMA	Amarillo Tower	FAY	Fayetteville Regional	ORF	Norfolk International
ASE	Aspen Tower	FLO	Florence City	PBI	Palm Beach International
AUS	Austin Tower	FSD	Sioux Falls/Foss Field	PHL	Philadelphia International
AVL	Asheville Regional	FSM	Fort Smith Tower	PIT	Pittsburgh International
AVP	Wilkes-Barre Tower	FWA	Fort Wayne International	PVD	Providence
AZO	Kalamazoo/Battle Creek Int	GEG	Spokane International	PWM	Portland Int`l Jetport
BFL	Bakersfield/Meadows Fld	GGG	Longview	RDG	Reading Regional
BGM	Binghamton Rgnl/Link Field	GPT	Gulfport/Biloxi Regional	RDU	Raleigh-Durham Int`l
BGR	Bangor Tower	GRB	Green Bay Tower	RFD	Rockford
BHM	Birmingham	GSO	Greensboro/Piedmont Triad	ROA	Roanoke Regional
BIL	Billings Logan Int`l	GSP	Greenville-Spartanburg	ROC	Greater Rochester Int`l
BIS	Bismarck Municipal	GTF	Great Falls International	ROW	Roswell Industrial Air Cnt
BNA	Nashville International	HSV	Huntsville Tower	RST	Rochester International
BOI	Boise Air Terminal	HTS	Huntington	RSW	Ft Myers/SW FL Int`l
BTR	Baton Rouge Ryan Field	HUF	Terre Haute/Hulman Rgnl	SAT	San Antonio International
BTV	Burlington Tower	ICT	Wichita Mid Continent	SAV	Savannah International
BUF	Greater Buffalo Int`l	ILM	Wilmington/New Hanover Int	SBA	Santa Barbara Municipal
CAE	Columbia Metropolitan	IND	Indianapolis International	SBN	South Bend/MI Rgnl Trans
CHA	Chattanooga/Lovell Field	ITO	Hilo International	SDF	Louisville Intl/Standiford
CHS	Charleston AFB/Int`l	JAN	Jackson International	SGF	Springfield-Branson Rgnl
CID	Cedar Rapids	JAX	Jacksonville Int`l	SHV	Shreveport Regional
CKB	Clarksburg/Benedum	LBB	Lubbock International	SUX	Sioux City/Sioux Gateway
CLE	Cleveland Hopkins Int`l	LCH	Lake Charles	SYR	Syracuse Hancock Int`l
CLT	Charlotte/Douglas Int`l	LEX	Lexington/Blue Grass	TLH	Tallahassee Regional
CMH	Port Columbus Int`l	LFT	Lafayette	TOL	Toledo Express
CMI	Champaign/Univ of Illinois	LIT	Little Rock Adams Field	TPA	Tampa International
COS	Colorado Springs Municipal	MAF	Midland International	TRI	Tri-Cities Regional
CPR	Casper	MCI	Kansas City International	TUL	Tulsa International
CRP	Corpus Christi	MDT	Harrisburg International	TYS	Knoxville/McGhee Tyson
CRW	Charleston/Yeager	MGM	Montgomery Rgnl/Dannelly	YNG	Youngstown Tower
CVG	Covington/Cincinnati Int`l	MIA	Miami International	HLN	Helena Tower
DAB	Daytona Beach Int`l	MKE	Milwaukee/Gen Mitchell Int	TWF	Twin Falls
DLH	Duluth International				

Appendix II. Facility Groups

In addition to the Core 30 airports, FAA also uses several other airport lists, including ASPM 82, OEP 35, and OPSNET 45 airports and 34 Select TRACONs.

Core 30 Airports
Source: System Data and Infrastructure Group, Office of Performance Analysis, Systems Operations Services, Air Traffic Organization, FAA (AJR-G2).

Code	Airport	Code	Airport
ATL	Hartsfield-Jackson Atlanta International	LAX	Los Angeles International
BOS	Boston Logan International	LGA	New York LaGuardia
BWI	Baltimore/Washington International	MCO	Orlando International
CLT	Charlotte Douglas International	MDW	Chicago Midway
DCA	Ronald Reagan Washington National	MEM	Memphis International
DEN	Denver International	MIA	Miami International
DFW	Dallas-Fort Worth International	MSP	Minneapolis/St. Paul International
DTW	Detroit Metropolitan Wayne County	ORD	Chicago O`Hare International
EWR	Newark Liberty International	PHL	Philadelphia International
FLL	Fort Lauderdale/Hollywood International	PHX	Phoenix Sky Harbor International
HNL	Honolulu International	SAN	San Diego International
IAD	Washington Dulles International	SEA	Seattle/Tacoma International
IAH	George Bush Houston Intercontinental	SFO	San Francisco International
JFK	New York John F. Kennedy International	SLC	Salt Lake City International
LAS	Las Vegas McCarran International	TPA	Tampa International

ASPM 82 Airports

This is a FAA list of 82 airports, including the Core 30, OEP 35, and other airports. The ASPM (Aviation System Performance Metrics) data includes flights to and from the 82 ASPM airports and all flights by ASPM carriers, as well as flights by those carriers to international and domestic non-ASPM airports.

Source: System Data and Infrastructure Group, Office of Performance Analysis, Systems Operations Services, Air Traffic Organization, FAA (AJR-G2).

Code	Airport	Code	Airport
ABQ	Albuquerque International Sunport	MCO	Orlando International
ANC	Ted Stevens Anchorage International	MDW	Chicago Midway
ATL	Hartsfield-Jackson Atlanta International	MEM	Memphis International
APA	Centennial Airport	MHT	Manchester
ASE	Aspen-Pitkin County Airport	MIA	Miami International
AUS	Austin-Bergstrom International	MKE	Milwaukee General Mitchell International
BDL	Bradley International	MSP	Minneapolis/St. Paul International
BHM	Birmingham International	MSY	Louis Armstrong New Orleans International
BJC	Rocky Mountain metro Airport	OAK	Oakland International
BNA	Nashville International	OGG	Kahului
BOI	Boise Airport	OMA	Omaha Eppley Airfield
BOS	Boston Logan International	ONT	Ontario International
BUF	Buffalo Niagara International	ORD	Chicago O'Hare International
BUR	Bob Hope (Burbank/Glendale/Pasadena)	OXR	Oxnard
BWI	Baltimore/Washington International	PBI	Palm Beach International
CLE	Cleveland Hopkins International	PDX	Portland International
CLT	Charlotte Douglas International	PHL	Philadelphia International
CMH	John Glenn Columbus International Airport	PHX	Phoenix Sky Harbor International
CVG	Cincinnati/Northern Kentucky International	PIT	Pittsburgh International
DAL	Dallas Love Field	PSP	Palm Springs International
DAY	Dayton International	PVD	Providence Francis Green State
DCA	Ronald Reagan Washington National	RDU	Raleigh/Durham International
DEN	Denver International	RFD	Greater Rockford
DFW	Dallas/Fort Worth International	RSW	Southwest Florida International
DTW	Detroit Metropolitan Wayne County	SAN	San Diego International
EWR	Newark Liberty International	SAT	San Antonio International
FLL	Fort Lauderdale/Hollywood International	SDF	Louisville International
GYY	Gary Chicago International	SEA	Seattle/Tacoma International
HNL	Honolulu International	SFO	San Francisco International
HOU	Houston Hobby	SJC	Norman Mineta San Jose International
HPN	Westchester County	SJU	San Juan Luis Munoz International
IAD	Washington Dulles International	SLC	Salt Lake City International
IAH	George Bush Houston Intercontinental	SMF	Sacramento International Airport
IND	Indianapolis International	SNA	John Wayne Airport-Orange County
ISP	Long Island Mac Arthur	STL	Lambert Saint Louis International
JAX	Jacksonville International	SWF	Stewart International
JFK	New York John F. Kennedy International	TEB	Teterboro
LAS	Las Vegas McCarran International	TPA	Tampa International
LAX	Los Angeles International	TUS	Tucson International
LGA	New York LaGuardia	VNY	Van Nuys
LGB	Long Beach		
MCI	Kansas City International		

OEP 35 Airports

This is an FAA list of 35 commercial U.S. airports with significant air traffic. These airports serve major metropolitan areas and some also serve as hubs for airline operations. The OEP 35 (Operational Evolution Partnership) is made up of the Core 30, plus five other airports. In 2005, this list was replaced by the Core 30 list.

Source: System Data and Infrastructure Group, Office of Performance Analysis, Systems Operations Services, Air Traffic Organization, FAA (AJR-G2). https://aspm.faa.gov/aspmhelp/index/OEP_35.html .

Code	Airport	Code	Airport
ATL	Hartsfield-Jackson Atlanta International	LGA	New York LaGuardia
BOS	Boston Logan International	MCO	Orlando International
BWI	Baltimore/Washington International	MDW	Chicago Midway
CLE	Cleveland Hopkins International	MEM	Memphis International
CLT	Charlotte Douglas International	MIA	Miami International
CVG	Cincinnati/Northern Kentucky International	MSP	Minneapolis/St Paul International
DCA	Ronald Reagan Washington National	ORD	Chicago O`Hare International
DEN	Denver International	PDX	Portland International
DFW	Dallas/Fort Worth International	PHL	Philadelphia International
DTW	Detroit Metropolitan Wayne County	PHX	Phoenix Sky Harbor International
EWR	Newark Liberty International	PIT	Pittsburgh International
FLL	Fort Lauderdale/Hollywood International	SAN	San Diego International
HNL	Honolulu International	SEA	Seattle/Tacoma International
IAD	Washington Dulles International	SFO	San Francisco International
IAH	George Bush Houston Intercontinental	SLC	Salt Lake City International
JFK	New York John F Kennedy International	STL	Lambert Saint Louis International
LAS	Las Vegas McCarran International	TPA	Tampa International
LAX	Los Angeles International		

OPSNET 45 Airports

The FAA list of OPSNET 45 airports appear below. In the late 1990s, these were airports that contributed to 75 percent of NAS delays and that each had 500 or more operations per day. Note, by FY2019, the number of OPSNET 45 airports with at least 500 operations per day fell to 36 airports.

Code	Airport	Code	Airport
ABQ	Albuquerque International Sunport	MCO	Orlando International
ATL	Hartsfield-Jackson Atlanta International	MDW	Chicago Midway
BNA	Nashville International	MEM	Memphis International
BOS	Boston Logan International	MIA	Miami International
BWI	Baltimore/Washington International	MSP	Minneapolis/St Paul International
CLE	Cleveland Hopkins International	MSY	Louis Armstrong New Orleans International
CLT	Charlotte Douglas International	OAK	Oakland International
CVG	Cincinnati/Northern Kentucky International	ORD	Chicago O`Hare International
DCA	Ronald Reagan Washington National	PBI	Palm Beach International
DEN	Denver International	PDX	Portland International
DFW	Dallas/Fort Worth International	PHL	Philadelphia International
DTW	Detroit Metropolitan Wayne County	PHX	Phoenix Sky Harbor International
EWR	Newark Liberty International	PIT	Pittsburgh International
FLL	Fort Lauderdale/Hollywood International	RDU	Raleigh/Durham International
HOU	Houston Hobby	SAN	San Diego International
IAD	Washington Dulles International	SEA	Seattle/Tacoma International
IAH	George Bush Houston Intercontinental	SFO	San Francisco International
IND	Indianapolis International	SJC	Norman Mineta San Jose International
JFK	New York John F Kennedy International	SLC	Salt Lake City International
LAS	Las Vegas McCarran International	STL	Lambert Saint Louis International
LAX	Los Angeles International	TEB	Teterboro
LGA	New York LaGuardia	TPA	Tampa International
MCI	Kansas City International		

34 Select TRACONs

The 34 Select are the TRACONs that support the OPSNET 45 airports. Refer to the above for the list of OPSNET 45 airports.

Source: System Data and Infrastructure Group, Office of Performance Analysis, Systems Operations Services, Air Traffic Organization, FAA (AJR-G2). https://aspm.faa.gov/aspmhelp/index/34_Select.html

LocID	TRACON	LocID	TRACON
A80	Atlanta TRACON	MEM	Memphis International
A90	Boston TRACON	MIA	Miami International
ABQ	Albuquerque International	MSY	New Orleans International/Moisant
BNA	Nashville International	N90	New York TRACON
C90	Chicago TRACON (Elgin)	NCT	Northern California TRACON
CLE	Cleveland Hopkins International	P50	Phoenix TRACON
CLT	Charlotte/Douglas International	P80	Portland TRACON
CVG	Covington/Cincinnati International	PBI	Palm Beach International
D01	Denver TRACON	PCT	Potomac TRACON
D10	Dallas/Ft Worth TRACON	PHL	Philadelphia International
D21	Detroit TRACON	PIT	Pittsburgh International
I90	Houston TRACON	RDU	Raleigh Durham International
IND	Indianapolis International	S46	Seattle/Tacoma TRACON
L30	Las Vegas TRACON	S56	Salt Lake City TRACON
M98	Minneapolis TRACON	SCT	Southern California TRACON
MCI	Kansas City International	T75	St Louis TRACON
MCO	Orlando International	TPA	Tampa International

Appendix III. Historical Airport and Center Operations

Airport Operations

A graph below displays the historical annual airport control tower operations data for 1946-2024. Included are calendar year data for 1946-1976 and fiscal year data for 1977-2024. Airport towers consist of FAA facilities, not including contract towers, and represent the number of arrivals and departures from the airport at which the airport traffic control tower is located. Data for 1946-1990 were originally published in the CAA Statistical Handbook of Civil Aviation and the successor publication FAA Statistical Handbook of Aviation. Data for 1991 onward come from the FAA OPSNET database.

In FY2024, airport operations amounted to 38.9 million, rising by 4.5%, from 37.2 million in FY2024 (below). Such operations peaked 43 years earlier, in FY1979, at 69 million. The decrease since the FY1979 peak was mainly due to a decrease in general aviation (GA) operations, which fell from 51.7 million in FY1979 to 16.3 million in FY2024 (not shown below).

Historical Annual Airport Operations, 1946 to 2024

Sources: 1946-1963: Civil Aeronautics Administration, CAA Statistical Handbook of Civil Aviation, various; 1964-1990: Federal Aviation Administration, FAA Statistical Handbook of Aviation, various; 1991-present: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), March 12, 2025.

Center Operations

Historical annual center operations for 1957-2024 are shown below. Included are calendar year data for 1957-1976 and fiscal year data for 1977-2024. In contrast to airport operations, center operations consist of the number of operations passing to and from a TRACON to a center, or from one center to another center, or from a center to a TRACON, and includes U.S. overflights and oceanic traffic through center air space that do not arrive at or depart from U.S. territory. Data up to 1990 were originally published in the CAA Statistical Handbook of Civil Aviation and the FAA Statistical Handbook of Aviation. Data for 1991 onward come from the FAA OPSNET database.

In FY2024, there were 43.8 million center operations, rising by 3.7% from 42.3 million in FY2023. The peak occurred in FY2005, at 47.5 million. The decrease over FY2005 - FY2024 was mainly due to a fall in center air taxi operations, which fell from 10.9 million in FY2005 to 5.6 million in FY2024 (not shown below).

The histories of airport and center operations also differ because in the past, airport operations largely consisted of GA flights. Such operations were mainly local and did not cross into center airspace; therefore, the large decrease in GA operations did not lead to a large decrease in center operations. In contrast, center GA operations, which numbered 8.8 million in FY1979, fell to about 6.2 million in FY2024 (not shown below). In addition, note that GA aircraft tend to be smaller and carry fewer passengers over shorter distances and time periods than other user classes such as commercial air carriers.

Historical Annual Center Operations, 1957 to 2024

Sources: 1957-1963: Civil Aeronautics Administration, CAA Statistical Handbook of Civil Aviation, various; 1964-1990: Federal Aviation Administration, FAA Statistical Handbook of Aviation, various; 1991-present: Federal Aviation Administration, Air Traffic Organization, Office of Performance Analysis (AJR-G), Operations Network (OPSNET), March 12, 2025.

Glossary of Terms

34 Select TRACONs	The 34 Select are the TRACONs support the OPSNET 45 airports. (*See*, Appendix II for the lists of 34 Select TRACONs and OPSNET 45 airports.)
AAR	*See*, Airport Arrival Rate (AAR).
ADC	*See*, Average Daily Capacity (ADC).
ADR	*See*, Airport Departure Rate (ADR).
AFP	*See*, Airspace Flow Programs (AFP).
Airport Arrival Rate (AAR)	The number of arriving aircraft which an airport or airspace can accept from an ARTCC per hour.
Airport Departure Rate (ADR)	The number of aircraft that can depart an airport and the airspace can accept per hour.
Airport Operations	*See*, Operations.
Airspace Flow Programs (AFP)	Airspace flow programs (AFPs) manage demand-capacity imbalances through the issuance of estimated departure clearance times (EDCT) to flights traversing a flow constrained area (FCA). An AFP might be used, for example, to reduce the rate of flights through a center when that center has reduced enroute capacity due to severe weather, replacing mile-in-trail (MIT) restrictions for a required reroute, managing airport arrival fix demand or controlling multiple airports within a terminal area.
Air Route Traffic Control Center (ARTCC)	A facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace and principally during the enroute phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to VFR aircraft. Also known as enroute or centers, there are 21 ARTCCs in the continental U.S. A list of the 21 ARTCCs appears in Appendix I.
Air Traffic Control (ATC)	A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.
Air Traffic Control Tower (ATCT)	A terminal facility that uses air/ground communications, visual signaling, and other devices to provide ATC services to aircraft operating in the vicinity of an airport or on the movement area. Authorizes aircraft to land or takeoff at the airport controlled by the tower or to transit the Class D airspace area regardless of flight plan or weather conditions (IFR or VFR). A tower may also provide approach control services (radar or nonradar).
Army Radar Approach Control (ARAC).	An FAA air traffic control facility using radar and air/ground communications to provide approach control services to aircraft arriving, departing, or transiting the airspace controlled by the facility. Service is provided to both civilian and U.S. Army airports. Currently, the U.S. does not operate any ARACs.
ASM	*See*, Available Seat Miles (ASM).
ASPM	*See*, Aviation System Performance Metrics (ASPM).
ASPM 82 Airports	The ASPM 82 is an FAA list of 82 airports, including the Core 30, OEP 35, and other airports. The ASPM (Aviation System Performance Metrics) data includes flights to and from the 82 ASPM airports and all flights by ASPM carriers, as well as flights by those carriers to international and domestic non-ASPM airports. Refer to Appendix II for the list of ASPM 82 airports, Core 30 airports and OEP 35 airports.
ATC	*See*, Air Traffic Control.
ATCT	*See*, Air Traffic Control Tower.
Available Seat Miles (ASM)	The aircraft miles flown in each inter-airport segment, multiplied by the number of seats available for fare paying passenger use on that segment. Available seat miles are computed by summation of the products of the number of miles on each airport segment, multiplied by the number of available seats on that segment.
Average Daily Capacity (ADC)	Average daily capacity is calculated as the sum of the airport departure rates (ADR) and the capacity airport arrival rates (AAR), divided by the number of days in the period under consideration.

Average Hourly Capacity (Called Rate)	*See*, Called Rate.
Aviation System Performance Metrics (ASPM)	Aviation system performance metrics (ASPM) data includes flights to and from 82 ASPM airports (including the Core 30 and OEP 35 airports) and all flights by ASPM carriers, as well as flights by those carriers to international and domestic non-ASPM airports. All IFR and some VFR flights are included. View this data on the OPSNET website.
	ASPM flight records fall into two groupings: (1) Efficiency flights are intended to capture all traffic handled by controllers at the ASPM airports and include flights with complete records and flights for which accurate estimates are possible due to only a few pieces of missing data; and, (2) ASPM flights exclude general aviation and military traffic, as well as local (non-itinerant) traffic and records for international flights missing data on the non-U.S. portion of the flight.
	ASPM contains key event times including actual, scheduled as well as the airline reported gate and runway times. It also synthesizes key times from the traffic flow management system (TFMS) and flight level information from the national traffic management log (NTML).
Called Rate	The hourly throughput that an airport's runways are able to sustain during periods of high demand. Called rates include all arrival and departure traffic that an airport can support. The called rate, or average hourly capacity, is the sum of the average arrival rate (AAR) and the average departure rate (ADR).
Cancellations	The set of cancelled departures as determined by a combination of scheduled flights not flown and TFMS flight plans that were cancelled and not re-filed for ASPM carriers and all other carriers reporting schedule data; and ASQP flight cancellations.
CCF	*See*, Combined Control Facility (CCF).
CAA	*See*, Civil Aeronautics Administration (CAA).
Center	Also known as air route traffic control center (ARTCC) or enroute. *See*, Air Route Traffic Control Center (ARTCC).
Center Operations	*See*, Operations.
CERAP	*See*, Combined Enroute Radar Approach Control (CERAP).
Civil Aeronautics Administration (CAA)	According to the FAA:
	To ensure a federal focus on aviation safety, President Franklin Roosevelt signed the Civil Aeronautics Act in 1938. The legislation established the independent Civil Aeronautics Authority (CAA), with a three-member Air Safety Board that would conduct accident investigations and recommend ways of preventing accidents. . . . In 1940, President Roosevelt split the CAA into two agencies, the Civil Aeronautics Administration, which went back to the Department of Commerce, and the Civil Aeronautics Board (CAB). The offshoot of the original CAA retained responsibility for ATC, airman and aircraft certification, safety enforcement, and airway development. . . .
	On the eve of America's entry into World War II, for defense purposes, CAA extended its ATC system to include operation of airport towers. In the postwar era, ATC became a permanent federal responsibility at most airports.
	The CAA became the Federal Aviation Agency in 1958 and the Federal Aviation Administration (FAA) in 1967 (Federal Aviation Administration, A Brief History of the FAA. https://www.faa.gov/about/history /brief history.
Class B Airspaces	Generally, that airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored and consists of a surface area and two or more layers (some Class B airspace areas resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace.
Combined ATCT TRACONs	*See*, Terminal Radar Control Facility (TRACON).

Combined Control Facility (CCF)	An air traffic control facility that provides approach control services for one or more airports as well as enroute air traffic control (center control) for a large area of airspace. Some may provide tower services along with approach control and enroute services. The U.S. has four CCFs. A list of the 4 CCFs appears in Appendix I.
Combined Enroute Radar Approach Control (CERAP)	An air traffic control facility that combines the functions of an ARTCC with a TRACON facility.
Coordinated Universal Time (UTC)	A 24-hour time standard is the basis for world-wide civil time today. This standard is kept using highly precise atomic clocks combined with the Earth's rotation. Until 1972, Greenwich Mean Time (also known as Zulu time) was the same as Universal Time (UT). Since then, GMT was no longer a time standard. FAA uses UTC in all operational activities (FAA Order 7210.3). *See also*, Greenwich Mean Time (GMT), Zulu Time.
Core 30 Airports	The 30 airports with the highest number of operations. A list of the Core 30 Airports appears in Appendix II.
Delays	*See*, OPSNET Delays.
Diversions	Gate return/air return and enroute diversion are considered a diversion. However, a planned stop for fuel, known before departure from the gate, where the flight has been dispatched to is not.
Direct User Access Terminal Service (DUATS)	DUATS, or direct user access terminal service is a weather information and flight plan processing service contracted by FAA for use by United States civil pilots and other authorized users. The DUAT Service is a telephone- and Internet-based system which allows the pilot to use a personal computer for access to a Federal Aviation Administration (FAA) database to obtain weather and aeronautical information and to file, amend, and cancel domestic IFR and VFR flight plans.
DUATS	*See*, Direct User Access Terminal Service (DUATS).
EDCT	*See*, Expected Departure Clearance Time (EDCT).
Enhanced Traffic Management System (ETMS)	*See*, Traffic Flow Management System (TFMS).
Enroute	Also known as Air Route Traffic Control Center (ARTCC) or, simply, Center. *See*, Air Route Traffic Control Center (ARTCC).
Enroute Operations	*See*, Operations.
Expected Departure Clearance Time (EDCT)	The runway release time assigned to an aircraft in a traffic management program. *See also*, Ground Delay Programs (GDP).
FAA	*See*, Federal Aviation Administration (FAA).
FCA	*See*, Flow Constrained Area (FCA).
Federal Aviation Administration (FAA)	The Federal Aviation Act of 1958 created the agency under the name Federal Aviation Agency. The name Federal Aviation Administration was adopted in 1967 when it became a part of the newly created Department of Transportation. The major roles of this agency include: - Regulating civil aviation to promote safety - Encouraging and developing civil aeronautics, including new aviation technology - Developing and operating a system of air traffic control and navigation for both civil and military aircraft - Researching and developing the National Airspace System and civil aeronautics - Developing and carrying out programs to control aircraft noise and other environmental effects of civil aviation - Regulating U.S. commercial space transportation
Federal Aviation Agency	The Federal Aviation Agency replaced the Civil Aeronautics Administration (CAA) under the Federal Aviation Act of 1958. In turn, the Federal Aviation Agency was replaced by the Federal Aviation Administration in 1967, which became a part of the newly created Department of Transportation.
Flight	The period from the start of the takeoff roll to the first landing.

Flight Service Station (FSS)	A flight service station (FSS) is an air traffic facility that provides information and services to aircraft pilots before, during, and after flights, but unlike air traffic control (ATC), is not responsible for giving instructions or clearances or providing separation.
Flow Constrained Area (FCA)	A defined region of airspace, a time interval, or other characteristic used to identify flights subject to a constraint. This constraint may be due to convective weather, military exercises, or other reasons.
FSS	See, Flight Service Station (FSS).
GDP	*See*, Ground Delay Programs (GDP).
GMT	*See*, Greenwich Mean Time (GMT).
Go Around	A go around (sometimes called overshoot) is an aborted landing of an aircraft that is on final approach.
Greenwich Mean Time (GMT)	According to the National Institute of Standards and Technology: Greenwich Mean Time (GMT) originally referred to the mean solar time at the Royal Observatory in Greenwich, England. As an astronomical time scale, it followed the irregular motion of Earth. The modern term for this astronomical time is UT1. The term GMT is now more commonly used to refer to the time zone at the prime meridian (0° longitude), in which case it is being used as a local representation of Coordinated Universal Time (UTC) and not UT1. However, UTC is adjusted with leap seconds to always be within less than one second of UT1, so either use of GMT can be considered equivalent to Coordinated Universal Time (UTC) when fractions of a second are not important (National Institute of Standards and Technology, "NIST Time Frequently Asked Questions (FAQ): What is Greenwich Mean Time (GMT)?," https://www.nist.gov/ pml/time-and-frequency-division/nist-time-frequently-asked-questions-faq#utcnist). FAA uses UTC in all operational activities (FAA Order 7210.3). See also, Coordinated Universal Time (UTC) or Zulu Time.
Ground Delay Programs (GDP)	Ground delay programs are implemented to control air traffic volume to airports where the projected traffic demand is expected to exceed the airport's acceptance rate for a lengthy period of time. Lengthy periods of demand exceeding the acceptance rate are normally a result of the airport's acceptance rate being reduced for some reason. The most common reason for a reduction in acceptance rate is adverse weather such as low ceilings and visibility. How it works: Flights that are destined to the affected airport are issued expected departure clearance times (EDCT) at their point of departure. Flights that have been issued EDCTs are not permitted to depart until their expected departure clearance time. These EDCTs are calculated in such a way as to meter the rate that traffic arrives at the affected airport; ensuring that demand is equal to acceptance rate. The length of delays that result from the implementation of a ground delay program depends upon two factors: how much greater than the acceptance rate the original demand was, and for what length of time the original demand was expected to exceed the acceptance rate.
Ground Stops (GS)	Ground stops are implemented for a number of reasons. The most common reasons are: • To control air traffic volume to airports when the projected traffic demand is expected to exceed the airport's acceptance rate for a short period of time. • To temporarily stop traffic allowing for the implementation of a longer-term solution, such as a ground delay program. • The affected airport's acceptance rate has been reduced to zero. How it works: • Flights that are destined to the affected airport are held at their departure point for the duration of the ground stop.
Airborne Holding	Airborne holding (or flying a hold) is a maneuver designed to delay an aircraft already in flight while keeping it within a specified airspace.
IFR Flights	Instrument Flight Rules. A set of rules governing the conduct of flights under instrument meteorological conditions.

Level-Offs	Level-offs are tracked from the top-of-descent (TOD) point or 200 nautical miles (NM) from the airport, whichever is closer. A trajectory segment is considered as a level-off if the change in altitude of position reports is less than or equal to 200 feet and the segment is at least 50 seconds in duration. The metric is calculated as the sum of the count of level-offs for each flight within a scope (i.e. non-military instrument flight rules (IFR) operations arriving at Core 30 airports), divided by the total number of flights within the scope. The metric is derived from flight position reports from the National Offload Program (NOP).
Load Factor	The summation of the number of revenue passenger miles (RPM), divided by the summation of the number of available seat miles (ASM), on revenue paying commercial flights. This quotient is expressed as a percentage. *See also*, available seat miles (ASM) and revenue passenger miles (RPM).
Loss of Separation Events	A defined loss of separation between airborne aircraft occurs whenever specified separation minima in controlled airspace are breached. Minimum separation standards for airspace are specified by air traffic service (ATS) authorities, based on International Civil Aviation Organization (ICAO) standards.
Miles-in-Trail (MIT)	A specified distance between aircraft (in nautical miles), normally, in the same stratum associated with the same destination or route of flight.
National Airspace System (NAS)	The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. This includes system components jointly shared with the military.
Notices to Airmen (NOTAM)	*See*, Notices to Airmen (NOTAM).
Notices to Airmen (NOTAM)	A NOTAM is a notice containing information essential to personnel concerned with flight operations but not known far enough in advance to be publicized by other means. It states the abnormal status of a component of the national airspace system (NAS) – not the normal status.
OEP 35 Airports	This is an FAA list of 35 commercial U.S. airports with significant air traffic. These airports serve major metropolitan areas and some also serve as hubs for airline operations. The OEP 35 (Operational Evolution Partnership) is made up of the Core 30, plus five other airports (Cincinnati, Cleveland, Pittsburgh, Portland, and St Louis). In 2005, this list was replaced by the Core 30 list. Source: System Data and Infrastructure Group, Office of Performance Analysis, Systems Operations Services, Air Traffic Organization, FAA (AJR-G2). https://aspm.faa.gov/aspmhelp/index/OEP_35.html. Refer to Appendix II for the list of OEP 35 Airports.
Operational Network (OPSNET)	OPSNET is the official source of national airspace system (NAS) air traffic operations and delay data. This data is used to analyze the performance of the FAA's air traffic control facilities. Reportable delay includes information such as the constrained facility, the reason for delay (weather, equipment, runways, volume, etc.), and the traffic management initiative (TMI) employed in delaying the aircraft.
Operations	• Airport operations: The number of arrivals and departures from the airport at which the airport traffic control tower is located. • Tower operations: Airport operations, plus airport tower overflights. • TRACON operations: The number of operations passed to and from area airports or centers, including overflights through TRACON airspace. Enroute or center operations: The number of operations passing to and from a TRACON to a center, or from one center to another center, or from a center to a TRACON. It includes U.S. overflights and oceanic traffic through center air space that do not arrive at or depart from U.S. territory.
OPSNET 45 Airports	The FAA list of OPSNET 45 airports appear below. In the late 1990s, there were 45 airports that contributed to 75 percent of NAS delays and had 500 or more operations per day. Note, by FY2019, the number of OPSNET 45 airports with at least 500 operations per day fell to 36 airports. Refer to Appendix II for the list of OPSNET 45 airports.

OPSNET Delays	Delays to instrument flight rules (IFR) traffic of 15 minutes or more, which result from the ATC system detaining an aircraft at the gate, short of the runway, on the runway, on a taxiway, or in an airborne holding configuration anywhere enroute, must be reported. The IFR controlling facility must ensure delay reports are received and entered into OPSNET. These OPSNET delays are caused by the application of initiatives by the traffic flow management (TFM) in response to weather conditions, increased traffic volume, runway conditions, equipment outages, and other causes.
	Below are descriptions of the categories of delay causes resulting in a reportable delay: • Weather: The presence of adverse weather conditions affecting operations. This includes wind, rain, snow/ice, low cloud ceilings, low visibility, and tornado/ hurricane/thunderstorm. • Volume: Delays must only be reported as volume when the airport is in its optimum configuration and no impacting conditions have been reported when the delays were incurred. • Runway/Taxiway: Reductions in facility capacity due to runway/taxiway closure or configuration changes. • Equipment: An equipment failure or outage causing reduced capacity. • Other: All impacting conditions that are not otherwise attributed to weather, equipment, runway/taxiway, or volume, such as airshow, aircraft emergency, bomb threat, external radio frequency interference, military operations, nonradar procedures, etc.
	Non-reportable delays are delays incurred by IFR traffic, but which should not be reported in OPSNET.
Overflights	• Terminal overflight: A terminal IFR flight that originates outside the TRACON's/RAPCON's/Radar ATCT's area and passes through the area without landing. • Enroute overflight: An enroute IFR flight that originates outside the ARTCC's area and passes through the area without landing.
Radar Approach Control (RAPCON)	An FAA air traffic control facility using radar and air/ground communications to provide approach control services to aircraft arriving, departing, or transiting the airspace controlled by the facility. Service is provided to both civilian and U.S. Air Force airports. Currently, the U.S. does not operate any RAPCONs.
Radar ATC Facility (RATCF)	An FAA air traffic control facility using radar and air/ground communications to provide approach control services to aircraft arriving, departing, or transiting the airspace controlled by the facility. Service is provided to both civilian and U.S. Navy airports. Currently, the U.S. does not operate any RATCFs.
RAPCON	*See*, Radar Approach Control (RAPCON).
RATCF	*See*, Radar ATC Facility (RATCF).
Revenue Passenger Miles (RPM)	One revenue passenger (fare paying passenger) transported one mile. Revenue passenger miles are computed by summation of the products of the revenue aircraft miles on each inter-airport segment, multiplied by the number of revenue passengers carried on that segment.
Runway Incursions	A runway incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft.
Stand-Alone TRACON	*See*, Terminal Radar Control Facility (TRACON).
Terminal Radar Control Facility (TRACON)	An FAA air traffic control facility using radar and air/ground communications to provide approach control services to aircraft arriving, departing, or transiting the airspace controlled by the facility. A TRACON located in an air traffic control tower is a combined TRACON. A TRACON that does not share a facility is a stand-alone TRACON. The U.S. has 146 civilian TRACONs. There are 121 TRACONs in shared facilities and 25 stand-alone TRACONs. A list of the 25 stand-alone TRACONs appears in Appendix I.
Top-of-Descent (TOD)	Top-of-Descent is the transition from the cruise phase of a flight to the descent phase, the point at which the planned descent to final approach altitude is initiated.
Tower Operations	*See*, Operations.
TRACON	*See*, Terminal Radar Control Facility (TRACON).
TRACON Operations	*See*, Operations.

Traffic Flow Management System (TFMS)	TFMS is a data exchange system for supporting the management and monitoring of national air traffic flow. TFMS processes all available data sources such as flight plan messages, flight plan amendment messages, and departure and arrival messages. TFMS is restricted to the subset of flights that fly under instrument flight rules (IFR) and are captured by the FAA's enroute computers. Formerly known as the enhanced traffic management system (ETMS).
UTC	*See*, Coordinated Universal Time (UTC).
VFR	*See*, Visual Flight Rules (VFR).
VFR flights	Flights operated under visual flight rules.
Visual Flight Rules (VFR)	Visual flight rules are rules that govern the procedures for conducting flights under visual conditions. The term "VFR" is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate a type of flight plan.
Zulu Time	The military name for Coordinated Universal Time (UTC). *See also*, Greenwich Mean Time (GMT), Universal Coordinated Time or Universal Time Coordinated (UTC).

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