Federal Aviation Administration

COMPENDIUM TO FAA AEROSPACE FORECAST 2026 – 2046

Emerging Aviation Entrants:

Unmanned Aircraft Systems & Advanced Air Mobility

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Acknowledgements

This document was prepared by the Forecast and Performance Analysis Division (APO-100), Office of Aviation Policy and Plans, under the direction of Michael Lukacs.

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Introduction

Technological advancements in materials, avionics, airframes, fuel types, and engines have created new types of aircraft and enabled novel operations in the National Airspace System (NAS) over the past decade. These new entrants are enhancing the productivity of the United States, creating high-skilled jobs and reshaping the future of aviation. President Trump issued Executive Orders (EO) 14305 and 14307, directing Federal agencies to enhance integration of Unmanned Aircraft Systems (UAS) into the NAS.[1] Congruent with and in support of Unleashing American Drone Dominance (EO 14307), this compendium analyzes data, provides context, and extrapolates the potential future of these new entrants. The findings and analyses provided within this document empower decision makers and American industry to accelerate the safe commercialization and integration of these new entrants into the NAS and continue to scale up domestic production to strengthen UAS supply chains.

Though many new technologies are emerging in aviation, this document focuses on two maturing categories: Unmanned Aircraft Systems (UAS) and Advanced Air Mobility (AAM). Both new entrants have shown maturing operations or significant market potential. As such, forecasts and supporting analyses have been developed to assist regulators for safe integration while preparing industry for UAS and AAM’s increased demands on the NAS. An abridged version of the Emerging Aviation Entrant Compendium is available in the Emerging Aviation Entrant section of

[1] EO 14305 https://www.govinfo.gov/content/pkg/DCPD-202500668/pdf/DCPD-202500668.pdf ; EO 14307 https://www.govinfo.gov/content/pkg/FR-2025-06-11/pdf/2025-10814.pdf

the Federal Aviation Administration (FAA) Aerospace Forecast.[2] The Compendium, however, includes more detailed forecasts, additional supporting research, and further industry context compared to the FAA Aerospace Forecast. In addition, the Compendium includes novel and developing forecasts for segments of UAS and AAM that are not addressed in the FAA Aerospace Forecast. As such, the Compendium can be viewed as an expanded analysis of, and conversation about the forecasts presented in the Emerging Aviation Entrant section of the FAA Aerospace Forecast.

This document is separated into two broad sections: UAS and AAM. The UAS section provides forecasts for the three regulatory weight categories of UAS:

- **Small UAS (sUAS):** 0.55 to 55 pounds
- **Large UAS (lUAS):** More than 55 pounds
- **Micro UAS (mUAS):** Less than 0.55 pounds

In the small UAS category, we present forecasts for both the recreational fleet operating under section 44809 and the nonrecreational fleet operating under Part 107. Data and forecasts for FAA regulated UAS operator training are presented for both The Recreational UAS Safety Test (TRUST) and Remote Pilot Certifications reported in the small UAS recreational and nonrecreational sections, respectively. Finally, responses to the Survey of UAS Operators and UAS import data are presented in support of the UAS forecasts. In the final section, a detailed AAM forecast is presented.

[2] https://www.faa.gov/data_research/aviation/aerospace_forecasts/FY_2026-2046_Full_Forecast_Document_Tables.pdf

Analysis and Forecasts: Unmanned Aircraft Systems and Advanced Air Mobility

Unmanned aircraft systems (UAS) have been experiencing healthy growth in the United States and around the world over the past decade. Unmanned aircraft systems consist of a remotely-piloted aircraft and its associated elements, including the ground control station and communication links. The growth of unmanned aircraft operating in the national airspace system (NAS) along with the standardization of UAS operations has led to a maturing of the UAS sector of aviation. However, many challenges remain in the process of integrating UAS into the NAS; particularly during a period when the sector is experiencing rapid diversification and growth, both with regards to aircraft as well as applications. The inclusion of UAS into the NAS has generated numerous challenges including safe and secure operations with manned aviation. Despite the challenges, the UAS sector continues to show enormous promise, especially in the commercial and public safety sectors, expanding economic opportunities, reducing risks to humans, and supporting enhanced emergency response activities.

The other entrant, Advanced Air Mobility (AAM), is continuing to introduce innovative aircraft designs and operations. FAA is actively working with industry to support regular AAM operations in the near future. Advanced Air Mobility is an umbrella term for aircraft weighing more than 1,320 pounds that implement advanced technologies such as distributed propulsion, Vertical Takeoff and Landing (VTOL), powered lift, non-traditional power systems, or autonomous technologies, for transport of passengers or cargo between two locations[3]. Advanced Air Mobility is split into two sub-categories: Urban Air Mobility (UAM) and Regional Air Mobility (RAM). Urban Air Mobility is focused on operations between or within urban environments while RAM is focused on operations outside of urban environments, such as those between hub airports and rural communities.

This document provides a comprehensive overview of the recreational and commercial UAS and AAM sectors, detailing recent trends synthesized from registration data, industry surveys, macro-market tracking, and operational metrics[4]. Based on these trends, Federal Aviation Administration

[3] https://www.faa.gov/air-taxis

[4] These are also called, interchangeably, hobby or model and nonrecreational UAS, respectively. On October 5, 2018, the President signed FAA Reauthorization Act of 2018 (Pub. L. 115-254). Section 349 of that Act repealed the Special Rule for Model Aircraft (section 336 of Pub. L. 112-95; Feb. 14, 2012) and replaced it with new conditions to operate recreational sUAS without requirements for FAA certification or operating authority. The Exception for Limited Recreational Operations of Unmanned Aircraft established by section 349 is codified at 49 U.S.C. 44809 [see https://www.federalregister.gov/documents/2019/05/17/2019-10169/exception-for-limited-recreational-operations-of-unmanned-aircraft for more details]. Recreational flyers, under Section 349, are referred to as "recreational flyers or modeler community-based organizations" [see https://www.faa.gov/uas/recreational_flyers]. In previous notes including other documents of the Agency, these terms are often interchanged.

(FAA) produces several forecasts. The forecasts detailed in the following sections are primarily based on the assumptions of an evolving regulatory framework, commercial innovation by manufacturers and operators, sustained recreational demand, and the growing market for UAS and AAM services. We do not include the effects of proposed rules or introduced legislation until they are promulgated or enacted. The forecasts for UAS and AAM are supported by analyses of recent survey findings, equipment imports, remote pilot data, and regulatory waivers and exemptions. This document concludes with a discussion of AAM informed by FAA-sponsored studies and industry research, and offers initial projections of AAM future activity.

Unmanned Aircraft Systems

Recreational Small Unmanned Aircraft Systems

FAA’s online Certificate of Aircraft Registration system for recreational/model small UAS (sUAS) went into effect on December 21, 2015. It requires all recreational operators of sUAS weighing between 0.55 pounds (or 250 grams) and 55 pounds (or 25 kilograms) to register either online using FAA’s DroneZone portal or the traditional paper-driven aircraft registry. This requirement includes operators of model aircraft, a recreational segment with a long history of operating within the NAS. Initially, operators were required to register only once regardless of the number of sUAS operated.

While the fundamental “one registration covers all”[5] rule remains intact, the implementation of the Remote Identification (Remote ID or RID) rule (fully enforced as of March 16, 2024) introduced specific inventory logging requirements based on the aircraft's equipment. For UAS produced with built-in Remote ID (Standard Remote ID), operators must add each specific aircraft to their registration inventory, including its unique make, model, and Remote ID serial number. For older or custom-built UAS utilizing a standalone broadcast module, operators only need to add the module's unique serial number to their inventory. The module can then be freely swapped between different aircraft. Unmanned Aircraft Systems lacking Remote ID capabilities are legally restricted to flying within the physical boundaries of an FAA-Recognized Identification Areas (FRIA) when operating in the NAS. Aircraft equipped with Standard Remote ID or a broadcast module must actively transmit its identity and location at all times, even when operating inside a FRIA.[6]

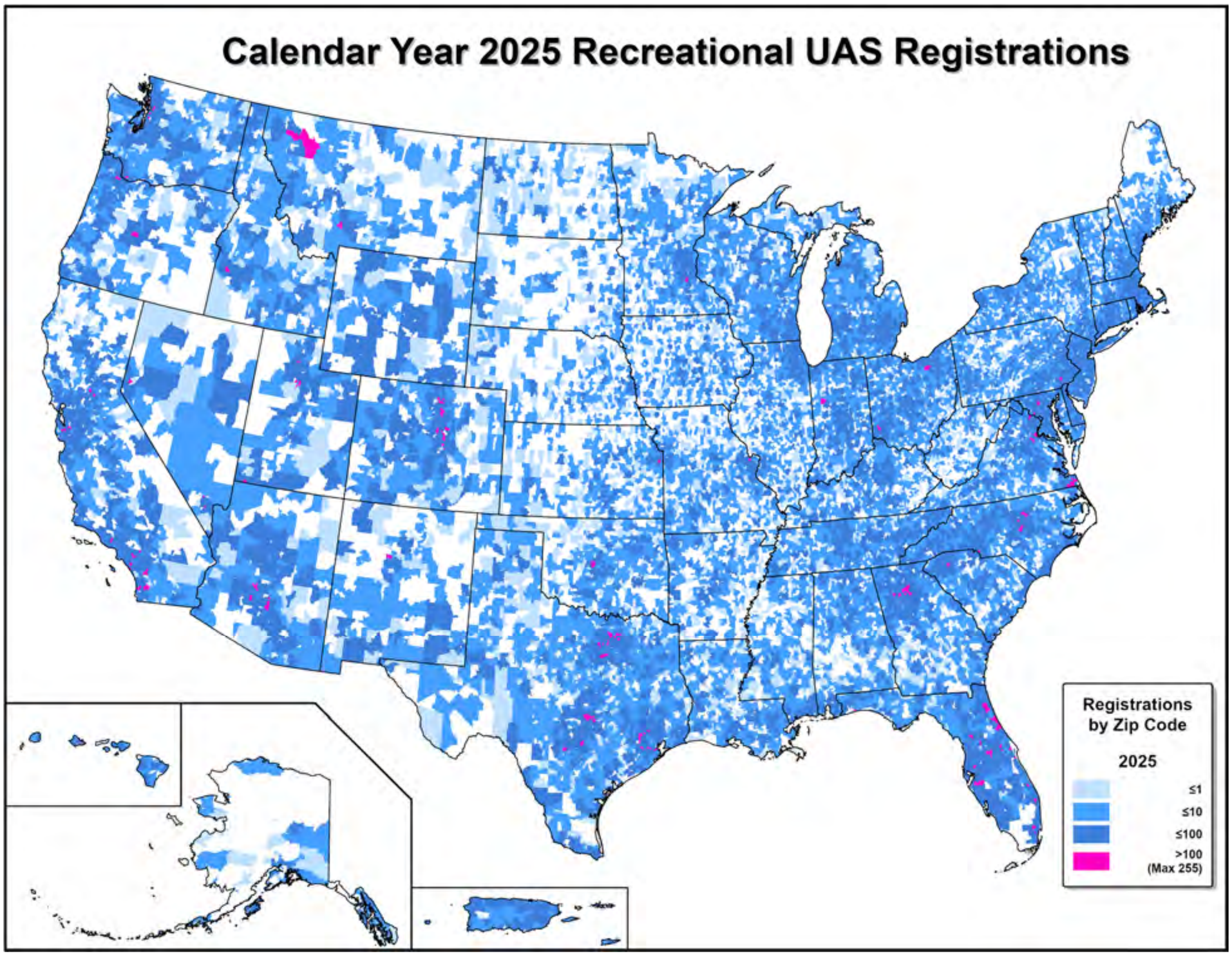
Driven by ongoing registration requirements, cumulative recreational sUAS operator registrations with FAA exceeded 1.66 million by the end of December 2025.[7] In 2025, new-owner registrations averaged 4,782 per month with the usual peaks during the winter holiday season and the summer

[5] 14 C.F.R. § 48.105(a) (2026) See (accessed July 2026): https://www.ecfr.gov/current/title-14/chapter-I/subchapter-C/part-48/subpart-B/section-48.105
[6] See https://www.faa.gov/uas/getting_started/remote_id/fria accessed April 2026.
[7] Federal Aviation Administration, "Register Your Drone," accessed April 2026, https://www.faa.gov/uas/getting_started/register_drone.

vacation season. In comparison, new owner registrations averaged approximately 5,810 in 2024, and 6,053 in 2023, showing a decreasing trend.

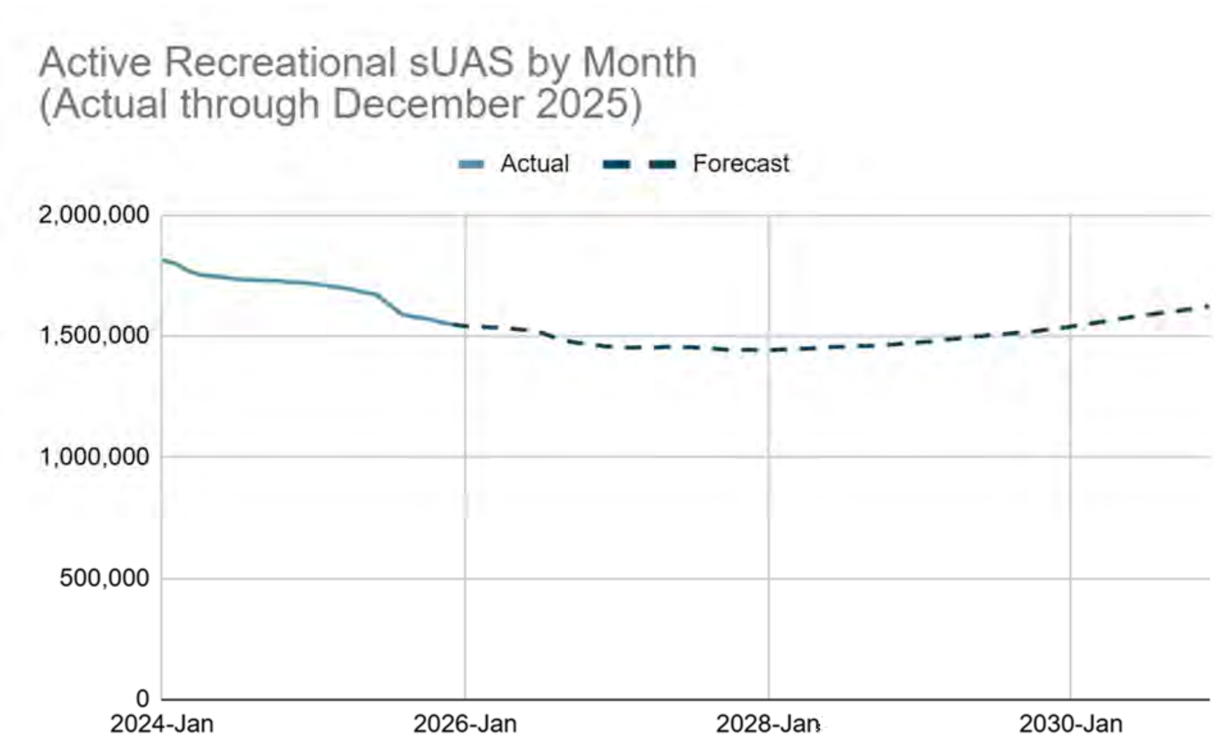
Alongside the drop in new recreational operator registrations, the number of registrants cancelling or allowing their status to expire has also decreased. After peaking at 16,348 per month in 2023, monthly cancellations and expirations fell sharply, averaging 7,750 per month in 2024 and 7,689 per month in 2025. Despite this decline, attrition still outpaced new sign-ups, causing the total registry to shrink by an average of 2,133 registrations per month in 2024 and 2,907 per month in 2025. Taken together, these trends indicate that recreational drone operations may be experiencing an overall decline. Notwithstanding the drop in recreational operator registrations, data from the recreational aircraft registry and the Survey of UAS Operators indicate an increase in the number of aircraft per operator. In 2024, operators registered an average of 0.97 aircraft per operator, a figure that climbed nearly 30.0 percent to 1.26 registered aircraft per operator in 2025. This upward trend is mirrored in the Survey of UAS Operators, where the self-reported average jumped 29.0 percent year-over-year, from 3.8 registered aircraft per operator in 2024 to 4.9 aircraft in 2025.[8] These metrics indicate that while the community of registered recreational operators is shrinking, those who remain are expanding their individual fleets.

[8] See Survey of UAS Operators at www.faa.gov/data_research/aviation/aerospace_forecast for additional information, accessed July 2026.



The geographic distribution of recreational operators typically tracks with overall population size, though counts drop significantly in high-density urban environments. The warmer and more temperate states, such as those in the South and along the West Coast, tend to have more recreational operators, reflecting better operating conditions. Texas and Florida have the most recreational operators, reflecting not only larger populations, but also a climate conducive to UAS operations.

Historically, the FAA forecasted the total number of sUAS registered. To conform the definition of active fleet in this section with other forecasts in the FAA's Aerospace Forecast report, the recreational sUAS fleet is now strictly defined as an "active fleet," meaning the operator must have had a valid registration within the reported calendar year. To account for statistical uncertainty, the FAA continues to develop a high, base, and low fleet size estimate. The high estimate encompasses all aircraft in circulation regardless of recent use or current registration, while the low estimate uses a conservative assumption of aircraft per registered operator. The base forecast uses multiple data sources to provide the best estimate of the total active recreational fleet in the United States.



While direct tracking of the active fleet is unavailable, survey data provides a reliable estimate of the average number of sUAS flown per operator. In 2025, Part 48 recreational registrants with two or fewer registered Remote ID equipped sUAS or modules reported 3.3 sUAS on average while registrants with 3 or more reported 5.8 sUAS. The difference between Drone Zone registered sUAS and survey reported sUAS is expected because individual UAS registration is not required for recreational operation, as discussed previously. On average, roughly 0.8 of those UAS fell outside the regulated weight threshold, either under 0.55 pounds or more than 55 pounds. Thus, the average number of sUAS operated per registrant in 2025 was 2.8 and 5.0, respectively, or 3.0 sUAS per registrant on average.

Applying these averages to the 2025 Part 48 recreational registry, which consisted of 296,277 registrants with two or fewer registered Remote ID equipment and 26,802 registrants with three or more yields an estimated active fleet of 1.59 million recreational sUAS in 2025. Using this same methodology for 2024, we estimate 1.79 million sUAS were operated by 392,359 registrants. Consequently, the active recreational fleet decreased 11.0 percent year-over-year.

Based on the downward trend in both operator registrations and active UAS, the active recreational sUAS fleet is projected to contract further, bottoming out in 2027. However, a rebound is expected over the remainder of the five-year forecast horizon. By 2030, the active fleet is projected to reach 1.62 million sUAS across approximately 373,000 recreational operators. Despite the initial dip, this recovery equates to a 1.0 percent Compound Annual Growth Rate (CAGR) over the five-year period.

Total Recreational/Model Fleet Forecast (Millions of sUAS units)

Calendar Year	**Low***	**Base****	**High*****
2025 (Actual)	0.41	1.55	1.93
2026	0.39	1.46	1.97
2027	0.39	1.44	2.00
2028	0.40	1.47	2.01
2029	0.41	1.53	2.03
2030	0.43	1.62	2.04

* effective counts of operators combined with previous forecast's multiplicity of craft ownership
** effective counts of operators combined with active aircraft reported in Survey of UAS Operators
*** new registration counts combined with previous forecast's multiplicity of craft ownership

However, given the possible sources of error from the Survey of UAS Operators, it is possible that the true active fleet is much larger or much smaller than our baseline forecast (referred elsewhere as forecast). Subsequently, we bracket our baseline forecast with high and low estimates. The high estimate is calculated using the cumulative sum of new Part 48 recreational registrants assuming a historical baseline average of 1.16 aircraft per registrant. In this scenario, the number of possible active aircraft in 2025 is 1.93 million, rising to 2.04 million aircraft by 2030. This represents a CAGR of 1.1 percent. Because this upper bound assumes that registrants never stop flying recreationally, it serves as a reasonable upper limit for the active fleet.

Similarly, the low estimate is calculated by applying the assumption of 1.16 aircraft per registrant to active Part 48 recreational operators. In other words, only registrants with current and valid Part 48 registrations are included in the low estimates while the high estimate includes every registrant who has ever registered under Part 48, even if expired or cancelled. Under this conservative model, the active fleet totals 0.41 million active aircraft in 2025 and is projected to reach 0.43 million by 2030 for a CAGR of 0.8 percent. Because the low forecast is constrained by the 1.16 ratio, which sits below the 3 registered aircraft-to-active registrant ratio recorded in 2025, it serves as a reasonable lower limit for the active sUAS fleet.

The high estimate reaches an eventual saturation point, while both the baseline and low estimates temporarily dip before returning to their market limits, reflecting a distinct transitional phase. This ongoing decline in new registrations combined with higher expirations and cancellations, may indicate that the market is shedding less active hobbyists and stabilizing at pre-pandemic levels.[9] If this is the case, new operator registrations should ideally outpace expirations and cancellations by 2027. However, if new recreational operator registrations totals continue to decline and remain below expirations and cancellations, it could indicate general preferences for recreational activities have shifted away from recreational sUAS to other hobbies. Next year's data will be critical in determining the direction of the recreational sUAS market in the United States.

The Recreational UAS Safety Test Certifications

The law[10] requires that all recreational flyers pass an aeronautical knowledge and safety test and provide proof of passage if asked by law enforcement or FAA personnel. The Recreational UAS Safety Test (TRUST) was developed to meet this requirement. TRUST provides education and testing on important safety and regulatory information.
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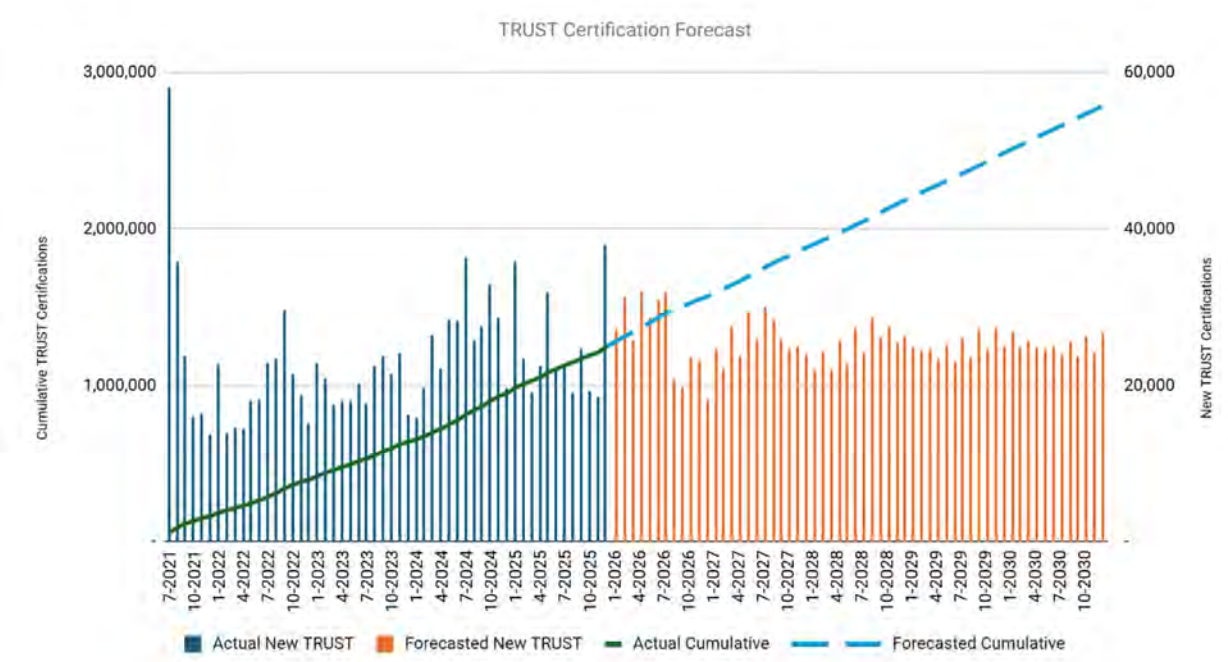

As TRUST certificates never expire, the total TRUST certificates numbers continue to increase without any potential for decrease. These numbers are not a valid indicator of growth in this market. As of 2025, cumulative certifications surpassed 1.25 million. This upward momentum is projected to continue over the forecast horizon, with cumulative certifications expected to reach 2.78 million by the end of 2030.

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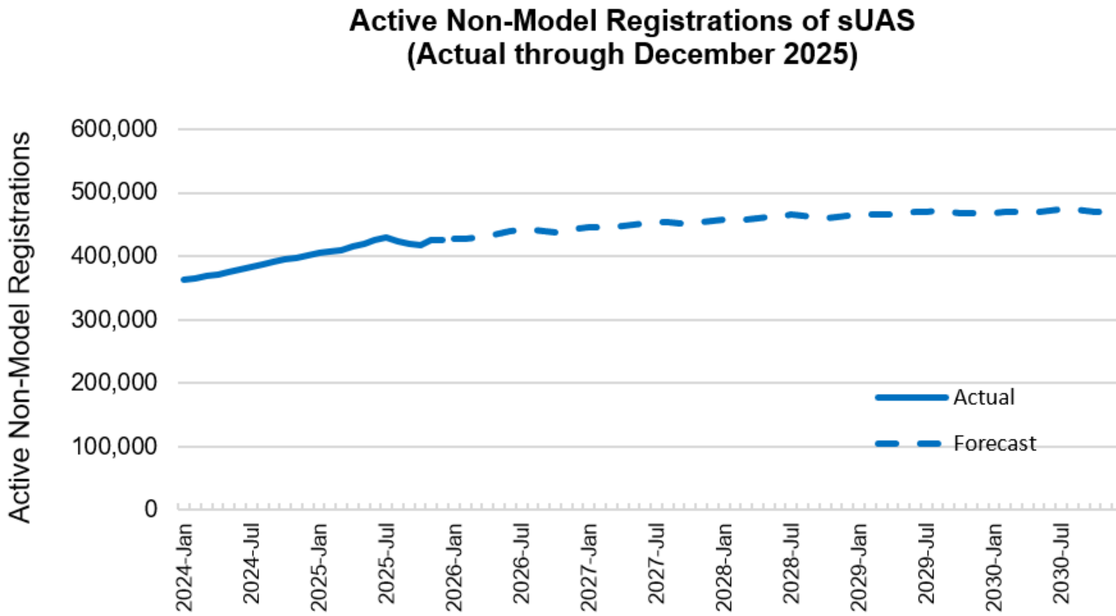
[9] It is quite likely that many users were buying and experimenting with recreational small drones given the COVID-19 public health emergency and the substantial portion of individuals working from home. This trend may have momentarily increased demand for recreational sUAS operations above the long-run demand.
[10] 49 U.S.C. § 44809

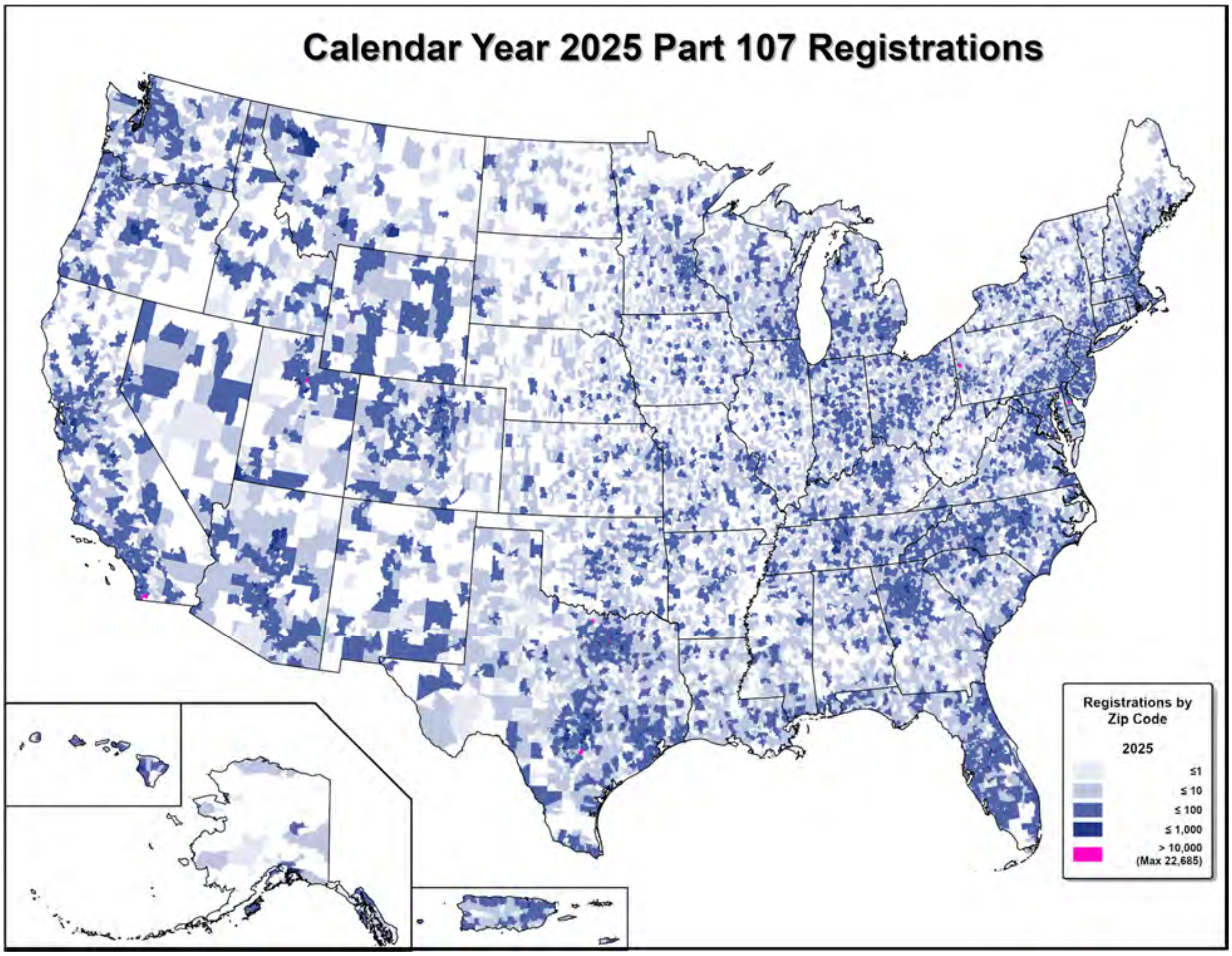
Commercial/Nonrecreational Small Unmanned Aircraft Systems

Online registration for commercial and other nonrecreational sUAS went into effect on April 1, 2016. Unlike recreational ownership, Part 107 regulations mandate that nonrecreational operators register each unmanned aircraft and establish a strict one-to-one correspondence between a registration and a specific aircraft. Since its inception, over one million aircraft consisting of a wide variety of manufactures, sizes, and models have been registered in the Part 107 aircraft registry. Between January and December 2025, more than 126,000 nonrecreational operators registered new equipment, down from the 135,000+ nonrecreational operators recorded during the same period in 2024. Average monthly new aircraft registrations peaked at 11,300 in 2024 before dipping slightly to around 10,500 in 2025. This remains just above the 2023 average of 10,409 new registrations per month. The aircraft registrations along with import data of sUAS (see UAS Imports section below) suggest that nonrecreational sUAS registrations may have peaked and entered a period of decline into the forecast period.

Though new registrations likely peaked in 2024, expirations and cancellations of current registrations are climbing. Part 107 aircraft registrations are valid for three years, after which they must be renewed or the registration expires. Any time during the three years the registration is valid, the registrant can cancel the registration for any reason. Just as new registrations add aircraft to the registry, expirations and cancellations remove aircraft from the registry. Average monthly expirations and cancellations increased from 8,110, on average, in 2024 to an average of 8,510 in 2025–a year-over-year increase of 5.0 percent. This upward trend continues from the 2023 low of 6,670 expirations and cancellations per month. The growth in expirations and cancellations is likely reflective of the total number of aircraft registered in the Part 107 registry rather than an exodus of operators. In fact, the portion of the registry that was cancelled or expired was relatively stable, fluctuating from 22.1 percent in 2023, to 24.3 percent in 2024, and 24.1 percent in 2025. Although new registrations are trending downward, on net, the Part 107 registry is growing. In 2025, the registry grew by almost 2,000 aircraft per month. In 2023, the monthly growth was 3,740 in 2023 and 3,160 in 2024. Because expirations and cancellations naturally scale with the size of the active registry, this slower net growth is primarily driven by the decline in new registrations. By the end of 2025, the registry reached 424,516 active aircraft, representing a year-over-year increase of 24,000 aircraft.



Geographically, Part 107 registrations tend to cluster in more populated areas. In the map below, most zip codes have at least one aircraft registered to an individual or business. Many zip codes have more than 10,000 registered aircraft. For example, Dallas and San Antonio, Texas shows a concentration of Part 107 registrations, likely due to UAS pilot programs for drone delivery and agricultural spraying. Similarly, Los Angeles and San Diego, California and Orlando, Florida have zip codes with 10,000 or more registered aircraft, likely used for various types of media. In Delaware, a popular state for corporate incorporation, many zip codes boast more than 10,000 registered Part 107 aircraft. However, it is likely many of the companies incorporated in Delaware are conducting drone operations in states other than Delaware. Salt Lake City, Utah; Detroit, Michigan; and Pittsburg, Pennsylvania also have zip codes with concentrated registrations.



Much like recreational sUAS trends, there is uncertainty over which aircraft are actively operated, requiring a high, base, and low forecast for the active nonrecreational aircraft fleet. The high forecast represents an upper bound and assumes that no registered aircraft is removed from operations and is calculated as the cumulative sum of all new registrations. For this reason, the high forecast provides a reasonable optimistic estimate of true active aircraft. Conversely, the low forecast establishes a lower limit for the active fleet by assuming a saturated market driven by falling new registrations alongside rising expirations and cancellations. This provides a reasonable lower limit of the active fleet. In the base forecast, we assume a portion of the expirations will renew over time, increasing the growth of the base forecast relative to the low forecast.

Active Nonrecreational Fleet (sUAS Units)

Calendar Year	Low*	Base**	High***
2025 (Actual)	424,516	424,516	1,074,451
2026	443,860	457,437	1,170,593
2027	455,680	484,154	1,258,383
2028	463,127	506,644	1,340,109
2029	468,229	525,422	1,417,922
2030	470,039	540,845	1,491,153

* effective/active fleet based on growth of expirations and cancellations
** effective/active fleet based on growth of expirations and cancellations are a portion of total fleet
*** cumulative new registration counts

In the base forecast, the Part 107 registry is projected to expand from 424,516 aircraft in 2025 to 540,845 by the end of 2030, representing a 5.0 percent CAGR. In this forecast, a decline in new registrations begins to flatten out by 2030 while proportional expirations and cancellation remain steady, allowing continued growth but at a slower pace. Greater than expected growth in new registrations for 2025 compared to last year's forecast has increased the trajectory of the forecast to improve the fit to the data. Consequently, cumulative new registrations for the high case are projected to grow from 1.07 million registrations in 2025 to 1.49 million registrations by the end of 2030, a 6.8 percent CAGR. For the low forecast, the active fleet grows from 424,516 aircraft in 2025 to 470,039 in 2030, a 3.0 percent CAGR, though the growth rate falls to near zero (0.3 percent) by 2030 as expirations and cancellations overtake the new registrations.

In this year's forecast, FAA aligns the base forecast to the definition of active fleet. Thus, the base forecast of active aircraft has shifted more toward the low forecast to account for this change. Consequently, upside uncertainty is significantly greater compared to last year's forecast, reflecting that the nonrecreational active fleet could be much higher than active registrations in the Part 107 registry. Results from the Survey of UAS Operators support this conclusion, indicating that most Part 107 operators with any valid sUAS registration in 2025 were actively operating at least one aircraft in the same year.

2025 UAS Operator Survey Preliminary Results

FAA requires a comprehensive understanding of UAS fleet characteristics, flight profiles, and operations within the NAS. Unlike commercial aviation, which is subject to statutory reporting, UAS primarily operate outside of airport environments and often within uncontrolled airspace without mandatory activity reporting. Consequently, reliable operational data is limited, which can hinder efforts to effectively integrate these systems into the NAS. The 2025 UAS Operator Survey is one source of data that helps FAA understand the fleet and flight characteristics UAS operating in the NAS. Data presented in this report are preliminary and subject to later adjustment. Full detail and analysis will be available in the full survey report published in late 2026.[11]

To improve the understanding of UAS activities, FAA conducts an annual survey which implements a stratified random sample survey design using operator registration type (recreational or Part 107) and geography (by county) as primary strata. For the 2025 survey cycle, two key methodological adjustments were introduced to enhance estimation accuracy. First, a new stratum was added based on the number of registered aircraft per operator (categorized as either two aircraft or fewer, or more than two). Second, operators with foreign addresses were isolated into their own segment and sampled independently as a distinct foreign population.

The survey framework was constructed from the recreational and Part 107 aircraft registries with a total of 321,696 invitations distributed. Out of these, just under 70,000 operators participated, yielding an overall response rate of 22 percent. Participation rates varied by cohort with responses from 23 percent of recreational registrants, 21 percent of Part 107 registrants, and 14 percent of registrants with a foreign address. Ultimately, the respondent pool provided broad geographic diversity, representing 101 countries, 58 states or state equivalents, and 2,193 counties or county equivalents.

All respondents were asked to report their total number of flights conducted in 2025, with a flight defined as a takeoff and subsequent landing. Recreational respondents were partitioned by three primary groups. First, the stratum of registered aircraft (n=34,270) with 66 percent of respondents with two or fewer registered aircraft, and 34 percent with greater than two registered aircraft. Second, for those reporting annual flights greater than zero (n=28,815), 74 percent were classified as operating “outside flying sites” and 26 percent were classified as operating “within flying sites”. Third, of those who provided self-identification (n=25,473), 71 percent identified exclusively as drone and not model aircraft operators, 17 percent identified as model aircraft operators and not drone operators, and 10 percent identified as operators of both model aircraft and drones. Respondents were classified as either “inside flying site” when 50 percent or greater of their reported annual flights were within flying sites or “outside flying site” when less than 50 percent of their reported annual flights were within flying sites. Two types of flying sites designations exist; first, FAA-Recognized Identification Areas (FRIAs) that numbered 2,655 by the end of 2025, and second, Recreational Flyer Fixed Sites that numbered 2,172 by the end of 2025, though a single physical location often carries both designations.[12]

The survey data indicates that model aircraft operators represent a distinct group with unique fleet and flight characteristics. These respondents typically own and operate more aircraft, conduct

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[11] See the Small Unmanned Aircraft Systems Survey Report 2025 for details of the survey design.

[12] See https://udds-faa.opendata.arcgis.com/datasets/faa::recreational-flyer-fixed-sites/about accessed April 2026.

more annual flights, operate for shorter durations, and utilize heavier, fixed-wing aircraft compared to those who identify as drone and not model aircraft operators. The added stratum aided differentiation as well. It is important to note that this stratum is based on registered aircraft within Drone Zone, and that this registration does not necessarily align with reported aircraft owned and operated for multiple reasons such as, recreational registrants are not required to register individual aircraft.

Mean Aircraft Owned and Operated by Recreational Operator Groups

Recreational Groups	Aircraft Owned (M)	Aircraft Operated (M)
Aircraft =< 2	3.9	3.6
Aircraft > 2	6.6	6.2
Inside Flying Site	12.8	10.7
Outside Flying Site	2.9	2.5
Drone and Model	11.2	9.9
Drone Not Model	1.8	1.8
Model Not Drone	13.5	11.5

Mean Flights, Flight Time, and Operating Altitude by Recreational Operator Groups

Recreational Groups	Total Annual Flights (M)	Flying Site Flights (M)	Minutes per Flight (M)	Operating Altitude in Feet (M)
Aircraft =< 2	45	21	17	198
Aircraft > 2	75	40	16	202
Inside Flying Site	133	126	12	235
Outside Flying Site	43	1	18	189
Drone and Model	99	58	12	192
Drone Not Model	26	3	18	187
Model Not Drone	143	120	9	239

Part 107 respondents were asked to report both nonrecreational and recreational flights. Historical trends continue to show that a significant portion of Part 107 operators fly exclusively for recreational purposes. In 2025, 65.5 percent of operators, referred to as “core Part 107,” reported at least one nonrecreational flight, while 26.7 percent flew strictly for recreation and 7.8 percent reported zero flights. As with the recreational operators, a fleet-size stratum was added for Part 107 operators. This data showed 75.4 percent of Part 107 respondents with a fleet of two or fewer aircraft and 24.6 percent with a fleet size greater than two aircraft. Core Part 107 operators with more than two registered aircraft reported substantially higher annual flight volumes and aircraft ownership compared to those with two or fewer registered aircraft.

Core Part 107 respondents also rated their activity levels across various industries using a five-point scale. Operators with more than two registered aircraft reported higher activity levels in nearly all industries, with the most significant differences appearing in law enforcement and emergency response (ER), education, utilities and telecommunications, and construction. Within ER organizations, 95 percent of respondents indicated involvement in multiple types of ER activity. The most common use cases included search and rescue, training, tactical support, and natural disaster response.

Core Part 107 Mean Aircraft Owned and Operated by Operator Group

Part 107 Groups (Core Part 107)	Aircraft Owned (M)	Aircraft Operated (M)
Aircraft =< 2	3.4	2.8
Aircraft > 2	9.4	6.6

Mean Flights, Flight Time, and Operating Altitude by Part 107 Operator Group

Part 107 Groups	Nonrecreational Flights (M)	Recreational Flights (M)	Minutes per Flight (M)	Operating Altitude in Feet (M)
Aircraft =< 2	69	24	24	221
Aircraft > 2	341	65	24	229
Core Part 107	206	33	24*	224*
Exclusively Recreational	0	46	29**	171**

* For nonrecreational flights only
** For recreational flights only

The 2025 Survey established foreign operators as a specific population, defined as those with a registered foreign address who primarily reside outside of the United States. This cohort yielded a notably lower response rate, potentially influenced by a language barrier as the survey was available exclusively in English. While respondents from this group spanned 100 countries, over 50 percent originated from just five nations: Canada, Germany, the United Kingdom, France, and Mexico. Flight activity for this group was primarily concentrated in California, Florida, and Arizona.

Foreign recreational operators were more likely to operate outside of designated flying sites compared to domestic operators, with 85 percent falling into this category. In addition, 90 percent identified as drone and not model aircraft operators and 4 percent as model aircraft and not drone operators, for a larger gap compared to domestic operators. Among foreign Part 107 registrants, 41 percent reported conducting zero flights in 2025, far exceeding the 8 percent inactivity rate reported by domestic Part 107 operators. Generally, foreign operators who did fly reported fewer annual flights than their domestic counterparts.

Mean Flights, Flight Time, and Operating Altitude by Foreign Recreational Operator Groups

Recreational Groups	Total Annual Flights (M)	Flying Site Flights (M)	Minutes per Flight (M)	Operating Altitude in Feet (M)
Inside Flying Site	96	74	17	274
Outside Flying Site	37	1	19	201
Drone and Model	205	112	24	237
Drone Not Model	14	1	17	196
Model Not Drone	73	50	11	320

Mean Flights, Flight Time, and Operating Altitude by Foreign Part 107 Operator Group

Part 107 Groups	Nonrecreational Flights (M)	Recreational Flights (M)	Minutes per Flight (M)	Operating Altitude in Feet (M)
Core Part 107	169	22	23*	252*
Exclusively Recreational	0	23	30**	196**

* For nonrecreational flights only
** For recreational flights only

This preliminary analysis reveals that UAS operating groups are more varied and differentiable than previously understood. The methodological improvements introduced in the 2025 Survey, particularly the inclusion of the strata for aircraft registration and foreign operator population–provided critical insights into these groups of interest. These data points support FAA's data-driven efforts to advance integration of the NAS and improve its safety while better serving the public.

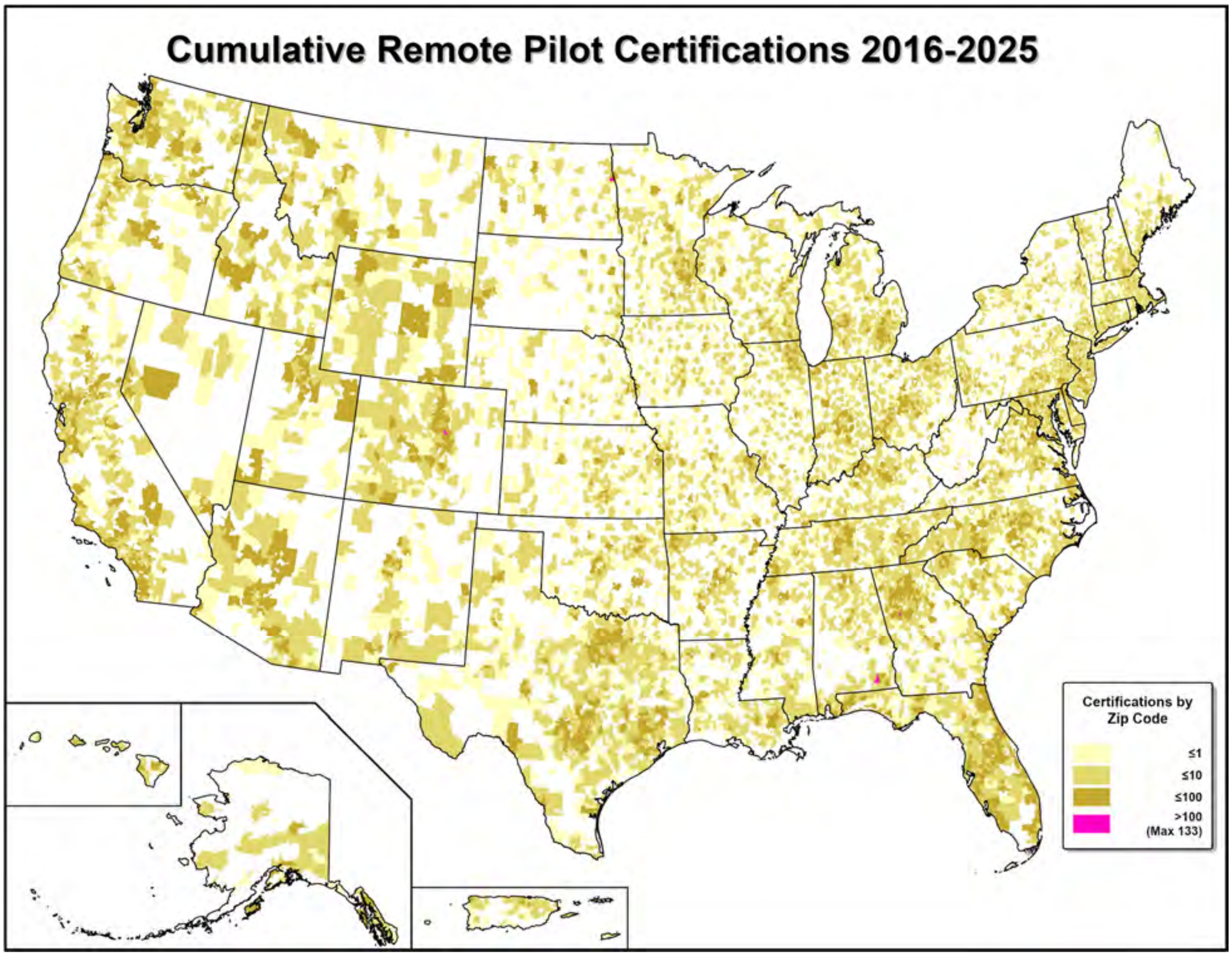
Remote Pilot Certifications

An important final metric in commercial sUAS is the trend in remote pilot (RP) certifications. RPs[13] are used primarily to facilitate commercial and public safety operations (i.e., law

[13] In our accounting of RPs, we take pilots who passed the initial knowledge test (or Part 107), plus current traditional pilots who took online training in lieu of the knowledge test (or Part 61).

enforcement and first responder), as discussed in the preceding section. As of December 2025, over 493,000 RP certifications had been issued, marking an increase of over 70,000 from December 2024.

Approximately three-quarters (78.0 percent) of the RPs hold only a Part 107 RP certificate, while the remaining (22.0 percent) hold both a Part 107 RP certificate along with a Part 61 pilot certificate. Over 90.0 percent of those who took the exam passed and obtained RP certification[14].



Geographically, RP certifications are clustered in population centers and favor warmer states. Unlike Part 107 sUAS registrations, RPs are not clustered in regions with known industries. Instead, only a few zip codes have relatively high numbers of RP certificates granted. This suggests

[14] Comparing data from last year, we notice that RP numbers have been revised downwards, by around 4,000 (or around -2.0 percent), over the entire program period. This is due to data clean up throwing out duplicate data and wrong data entry noticed during renewal.

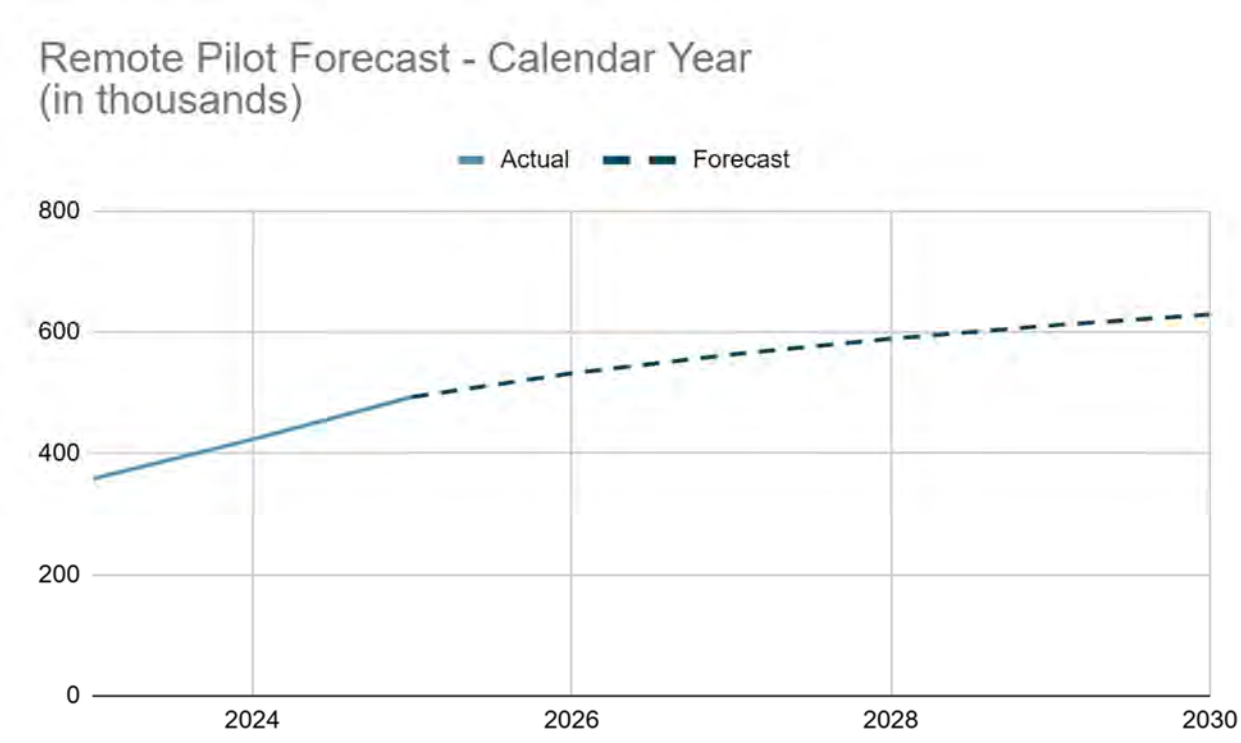
that while Part 107 sUAS registrations are concentrated within large, national business entities, the RP operating the aircraft are likely local to the operations.[15]

The RP forecasts presented below are based on three primary data sources: (a) trends in total RPs; (b) renewal trends; and (c) trends in Part 107 sUAS registration, and forecasts of fleet. In this context, it is important to note that the empirical relationship between trends in RP and Part 107 sUAS registration, particularly new registration, has changed in the past few years with a decline in the ratio of units registered to RPs. Given the trends in registration and our forecast of the commercial sUAS fleet (i.e., base forecasts), the FAA assumes that the trend in remote pilots to units of Part 107 sUAS will remain at its 2025 level of 1.16 RP per active registration in the Part 107 registry.

Using these assumptions combined with the base scenario of the Part 107 sUAS forecast, the FAA projects RPs in the graph below. Last year's forecast, projected RPs to be a little under 433,000 by the end of 2025. Actual registrations by the end of 2025 totaled 493,396 (or over 60,000 more than last year's projection) thus the number of actual RPs exceeded last year's projection by 13.9 percent for 2025. The rise in the number of remote pilot certifications is attributed to expanding commercial industries, evolving federal regulations, academic and STEM integration, and increased accessibility to training.

Given the actual numbers at the end of 2025, RPs are set to experience tremendous growth following the growth trends of the commercial sUAS sector. Starting from the base of 493,396 RPs in 2025, the expected growth in commercial activities leads to a 28.0 percent increase in the total number of RPs by 2030 (628,600), showcasing tremendous opportunities for growth in employment—over 135,000 new RP opportunities—associated with commercial and public use activities of sUAS. The potential for RPs is likely to increase as larger UAS are used in commercial activities and advanced air mobility (AAM) starts operations.

[15] The pink cluster is likely indicative of the types of UAS activities in this area especially those at Fort Rucker. Fort Rucker is the home of U.S. Army Aviation and is where UAS operators are trained. As these soldiers transition to the private sector or seek to utilize their skills off-duty, they acquire their civilian FAA Part 107 remote pilot certifications. Military UAS operators often have hundreds of hours of mission-ready flight experience that private utility, surveying, and security firms highly value.



Large Unmanned Aircraft Systems

Part 107 limits the gross takeoff weight of unmanned aircraft (or sUAS) to below 55 pounds. Thus, unmanned aircraft with gross takeoff weights above 55 pounds must operate under separate regulations and are considered a separate category of UAS, referred to as large UAS (lUAS) for this analysis. Since lUAS are not type certificated and do not fall under the purview of Part 107 operating rules, their operation requires either an exemption pursuant to 49 U.S.C. § 44807 or a Public Aircraft Operator (PAO) Certificate of Waiver or Authorization (COA)[16]. In addition, FAA requires lUAS operating under a § 44807 exemption or COA to receive a tail number by registering the unmanned aircraft in the Part 47 aircraft registry[17].

The FAA has granted exemptions under 49 U.S.C. § 44807 since their introduction in the FAA Reauthorization Act of 2018. Both applications for a § 44807 exemption by individuals and organizations, and subsequent FAA determination decisions are publicly available[18]. Because a §

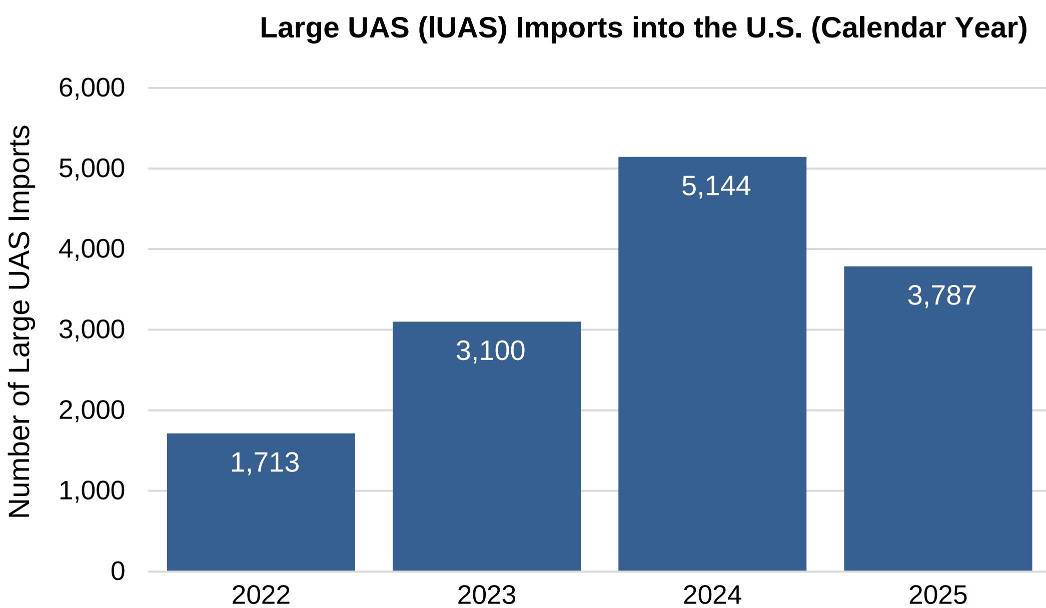
[16] Federal Aviation Administration. (n.d.). Section 44807 - Special Authority for Certain Unmanned Aircraft Systems. U.S. Department of Transportation. https://www.faa.gov/uas/advanced_operations/certification/section_44807. Accessed April 2026.

[17] Federal Aviation Administration. (2025, September 9). Aircraft registration. Accessed April 2026.

[18] All 44807-exemption applications and decisions are available at regulations.gov in the “Other” category.

44807 exemption is a prerequisite for commercial lUAS operation, they historically served as a leading indicator of both fleet procurement and civilian lUAS operations. Though the § 44807 exemption framework was slated to sunset in May 2024, the FAA Reauthorization Act of 2024 extended its authority through September 2033[19].

While past forecasting cycles relied on the count of new § 44807 exemptions to project future growth of the lUAS fleet, a recent divergence—characterized by declining new exemptions alongside rising new lUAS registrations—indicates this metric is no longer a primary predictive indicator. Alternative variables, such as lUAS import volumes, have demonstrated superior predictive power for current forecasting models. This shift suggests that many operators may be deferring exemption applications in anticipation of upcoming, permanent regulatory frameworks. While large UAS (lUAS) imports had steadily climbed since U.S. Customs and Border Patrol began tracking the data in 2022, volumes dropped sharply in 2025, falling to 3,787 units from 5,144 units in 2024.[20] The contraction suggests that demand for lUAS could be temporarily slowing into the future. This shift could be driven by several factors, including operators delaying procurement ahead of anticipated regulatory updates, or general market and policy uncertainty. Consequently, the FAA expects a temporary deceleration in the growth of this aircraft segment.



[19] Continuing Appropriations Act, 2024 and Other Extensions Act, H.R. 5860, 118th Cong. (2023). Accessed April 2026.

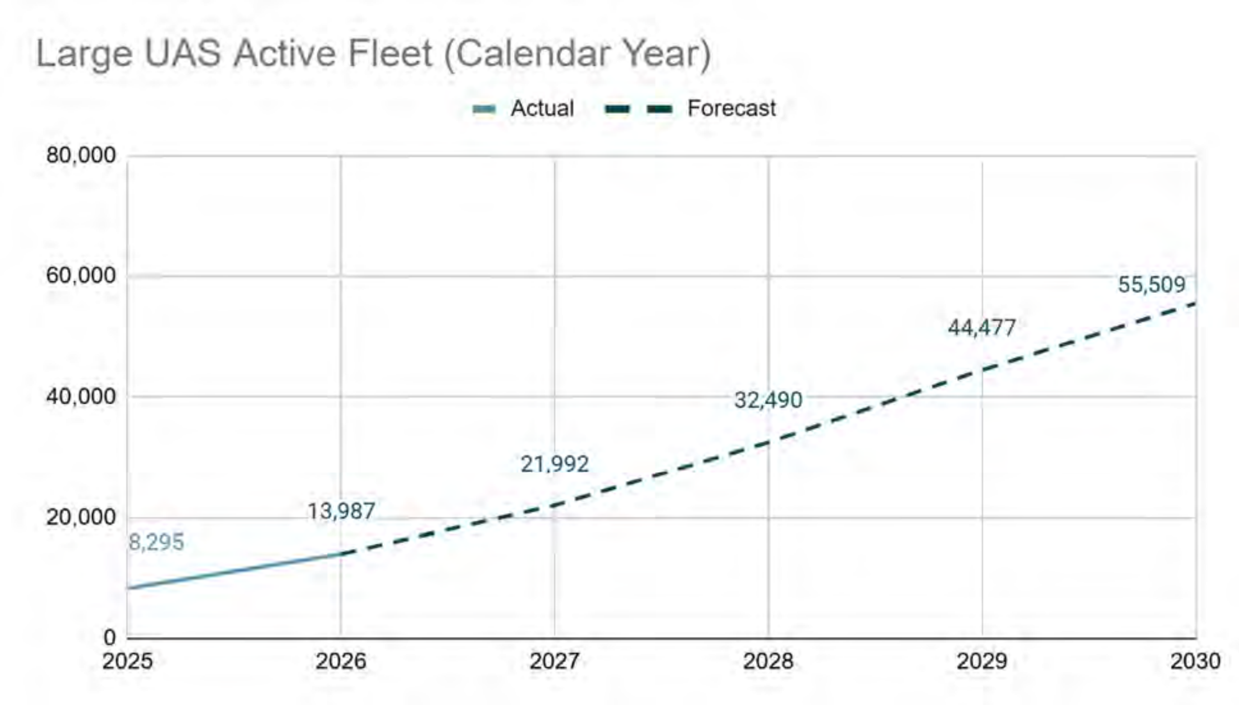
[20] See United States International Trade Commission: https://dataweb.usitc.gov/tariff/database/details for dollar amounts of imports by Harmonized Tariff Schedule numbers: https://hts.usitc.gov/

Since lUAS must register under Part 47, this database serves as a reliable tool for estimating the active fleet. Using the Aircraft Reference file from the publicly available Part 47 aircraft registry, FAA identifies the lUAS in the Aircraft Registration Master file and the Deregistered Aircraft file to calculate the active fleet of lUAS[21]. In 2025, 4,753 new lUAS aircraft were added to the Part 47 aircraft registry, a 70 percent increase from 2024. Despite 10 percent (440 aircraft) of the fleet being delisted during 2025, the active lUAS fleet expanded to 8,637 aircraft by the end of the year.

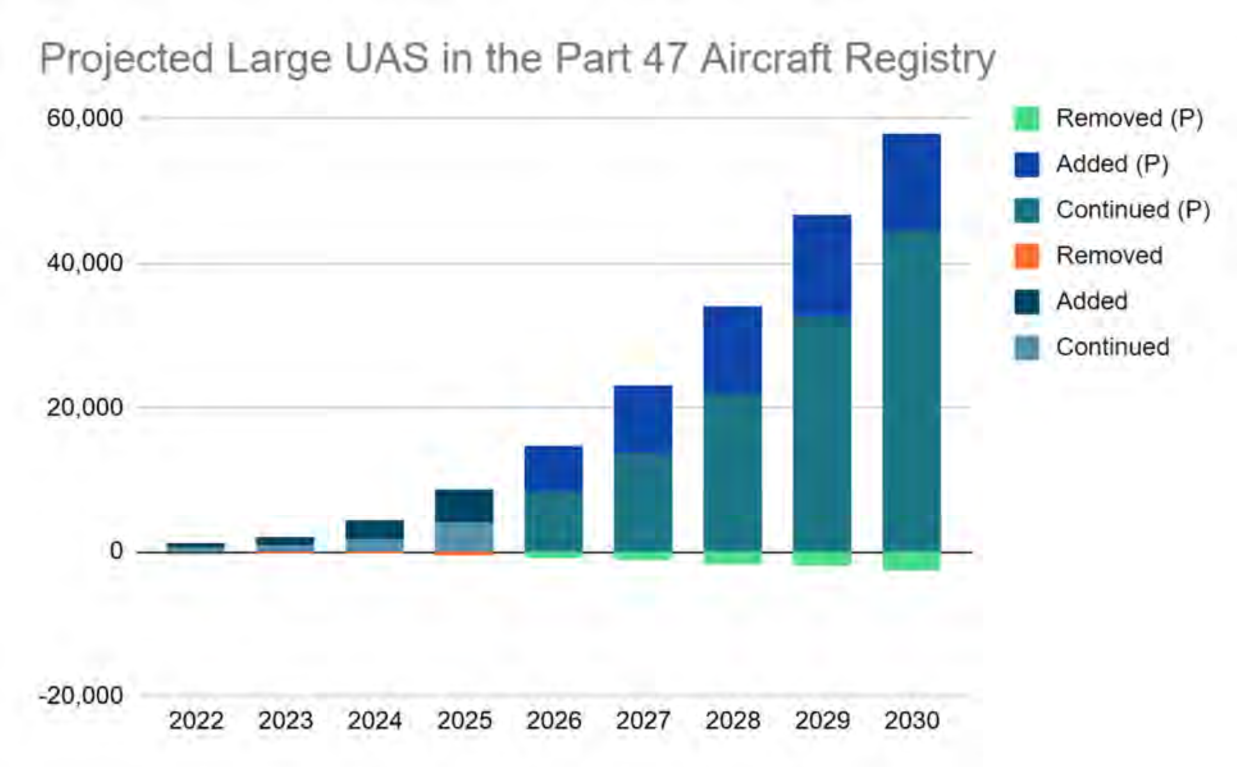
Unlike previous years, agricultural spraying lUAS did not dominate the new registrations in the Part 47 aircraft registry. New agricultural spraying lUAS registrations dropped 58.7 percent, falling from 1,432 in 2024 to 592 in 2025. This contraction occurred even as non-agricultural lUAS registrations surged by 204 percent, climbing from 1,368 to 4,161 over the same period[22]. This downturn in what was previously the market's fastest-growing segment further points toward a temporary slowdown in overall lUAS growth. Driven by cooling import volumes and a sharp pullback in agricultural spraying platforms, FAA expects new lUAS registrations to decelerate over the next couple of years compared to previous projections. Despite this slower near-term pace, the active lUAS fleet is still forecast to experience robust long-term expansion, climbing from 8,295 aircraft in 2025 to 55,509 by the end of 2030—a 46.3 percent Compound Annual Growth Rate (CAGR).

[21] The Public Aircraft Registry data for 2022 is available at https://bit.ly/433iqET. Unmanned aircraft are separated from crewed aircraft using the "NO-SEATS" field in the Aircraft Reference file. The "AC-WEIGHT" field is used to remove all small unmanned aircraft, and the "TYPE-ACFT" field is used to remove all lighter-than-air aircraft, including blimps and balloons. The remaining codes – held within the "CODE" field – are matched with the "MFR MDL CODE" in the Aircraft Registration Master file and the Deregistered Aircraft file and adjusted based on the "STATUS CODE" field. The remaining aircraft are sorted for the year they registered using the "CERT ISSUE DATE" or "LAST ACTION DATE". The count of new registration, older registrations, and delisted registrations are used to construct the active lUAS fleet.

[22] Several new manufactures of agricultural-spraying large UAS had new aircraft added to the Part 47 aircraft registry. As such, FAA expanded the list of makes and models that are included in the agriculture large UAS estimations.



While the active fleet can be tracked through the Part 47 aircraft registry, actual lUAS operations are more difficult to observe. In previous years, the majority of registered lUAS were agricultural spraying aircraft, meaning most flights were concentrated close to the ground. However, with the slowing in new agricultural spraying lUAS and a surge in non-agricultural lUAS, operations of this segment could increase the density of overall aviation operations in the NAS. To better understand these evolving flight patterns, FAA has expanded its annual Survey of UAS Operators and expects this operational data to be available for future forecasts.

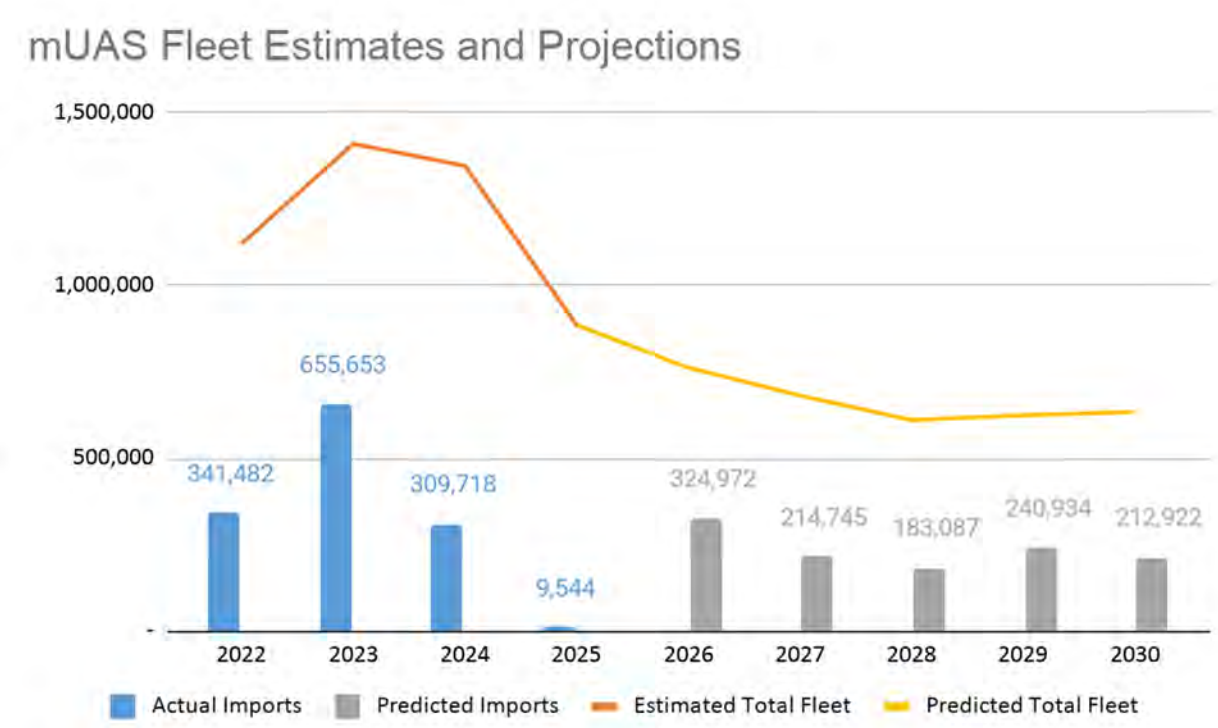


Micro Unmanned Aircraft Systems

Part 107 and § 44809 both specify that UAS weighing under 0.55 lbs are exempt from requirements to register. The fleet of this category of UAS, which this report refers to as micro UAS (mUAS), has been difficult to estimate given the lack of data related to the number of aircraft, such as registry data. Effective January 27, 2022, the United States modified the Harmonized Tariff Schedule (HTSUS) via Presidential Proclamation 10326 ("To Modify the Harmonized Tariff Schedule of the United States and for Other Purposes"), thereby aligning domestic import classifications with the international recommendations of the World Customs Organization's Seventh Edition of the Harmonized System (HS 2022); see UAS import section below. The new categories added to the HTSUS included a category for UAS with weights less than 0.25kg or 0.55lbs, which has allowed U.S. Customs and Border Patrol (CBP) to track both the declared values and number of mUAS entering the United States from foreign ports (see import section for more detail). Given that almost all mUAS sold in the United States are manufactured abroad, this data from CBP is a reasonable approximation of the total mUAS added to the U.S. fleet of mUAS each year.

There is no official regulatory or industry-wide consensus that strictly defines micro-drones. The FAA does not categorize drones by their capability or price point (such as "toy" vs. "pro"). Instead, they are regulated based on weight and operational use. Drones under this weight are entirely exempt from FAA registration if they are flown strictly for recreational purposes. Because millions of these micro-drones are bought and flown without any requirement to register with the government, the exact market share of cheap toys versus high-end micro-drones is untracked. If a sub-0.55 lb drone is to generate compensation (under Part 107 rules), it must be registered regardless of how small it is. While a precise percentage isn't available, retail unit volume reports suggest that 60 to 70 percent are toy and entry-level starter drones.

Though the trade data gives us a reasonable estimate of the flow of mUAS into the United States, the fleet or stock of mUAS requires some additional data and assumptions to estimate. First, data from the Survey of UAS Operators suggest that the average life of a UAS is around three years with many lasting only weeks or months, while others last up to a decade. Accordingly, we estimate the economic depreciation of mUAS is around 0.33 per year. Second, given that the recreational sUAS fleet has almost saturated the market and the Part 107 sUAS fleet is trending toward a saturation, we also assume the mUAS are trending toward or already saturating the market. As such, the flow of imported mUAS are replacing the mUAS lost from depreciation, and thus the imported mUAS divided by the depreciation rate provides the stable state of the mUAS fleet.



According to this model, the mUAS fleet size peaked at 1,410,468 units in 2023 before experiencing a steady decline to 885,000 in 2025. Assuming the 2025 slowdown of imported mUAS is transitory, we forecast the fleet of mUAS to reach a steady state of around 600,000 aircraft by 2028 and remain there through 2030.

The observed peak in 2023 synchronizes with other data on recreational operators. The global pandemic sent many individuals looking for outdoor hobbies. However, as the economy reopened, many of the less enthusiastic operators switched to other activities, reducing the demand for new UAS. Thus, demand shifted from the temporarily inflated levels due to the pandemic shock to the long-run average.

Unmanned Aircraft Systems Imports

The supply of UAS to consumers and businesses directly constrains the growth of UAS fleets. Without new aircraft added to the U.S. economy, UAS fleets shrink as aircraft fail, crash, or become obsolete. The supply of UAS comes from both domestic and foreign manufactures. Although domestic manufactures are not required to report the number of aircraft produced or the value of those aircraft, importers of foreign aircraft are required to declare the value, quantity, and type of aircraft entering the country. Given that the majority of UAS sold and operated in the United States are imported, the UAS import data is a significant leading indicator of the growth of UAS fleets.

Effective January 27, 2022, the United States modified the Harmonized Tariff Schedule (HTSUS) via Presidential Proclamation 10326[23], thereby aligning domestic import classifications with the international recommendations of the World Customs Organization's Seventh Edition of the Harmonized System (HS 2022). This update established a clear line between commercial unmanned aircraft and recreational toys. The new schedule splits UAS into several categories based on weight and includes a specialized category for UAS capable of passenger services. This data is collected by U.S. Customs and Border Patrol (CBP) and maintained by U.S. Census Bureau.[24] The new HTSUS classifications provide FAA additional information regarding the number of UAS purchased in the United States.

Intensifying global geopolitics are driving a push to manufacture UAS in the United States. Driven by national security concerns, federal policies are actively decoupling the U.S. UAS supply chain from China, which currently controls roughly 90 percent of the global commercial UAS market. Even as American UAS manufacturers scale up final assembly within the United States, they are not yet fully independent of China. Most domestic UAS manufactures still rely on Chinese supply chains for essential components such as batteries, motors, flight controllers and printed circuit boards.

For this forecast we have reconciled the HTSUS import categories with the UAS categories used in this paper (see following table).

[23] See Federal Register :: To Modify the Harmonized Tariff Schedule of the United States and for Other Purposes accessed July 2026

[24] See usatradeonline.census.gov for additional information.

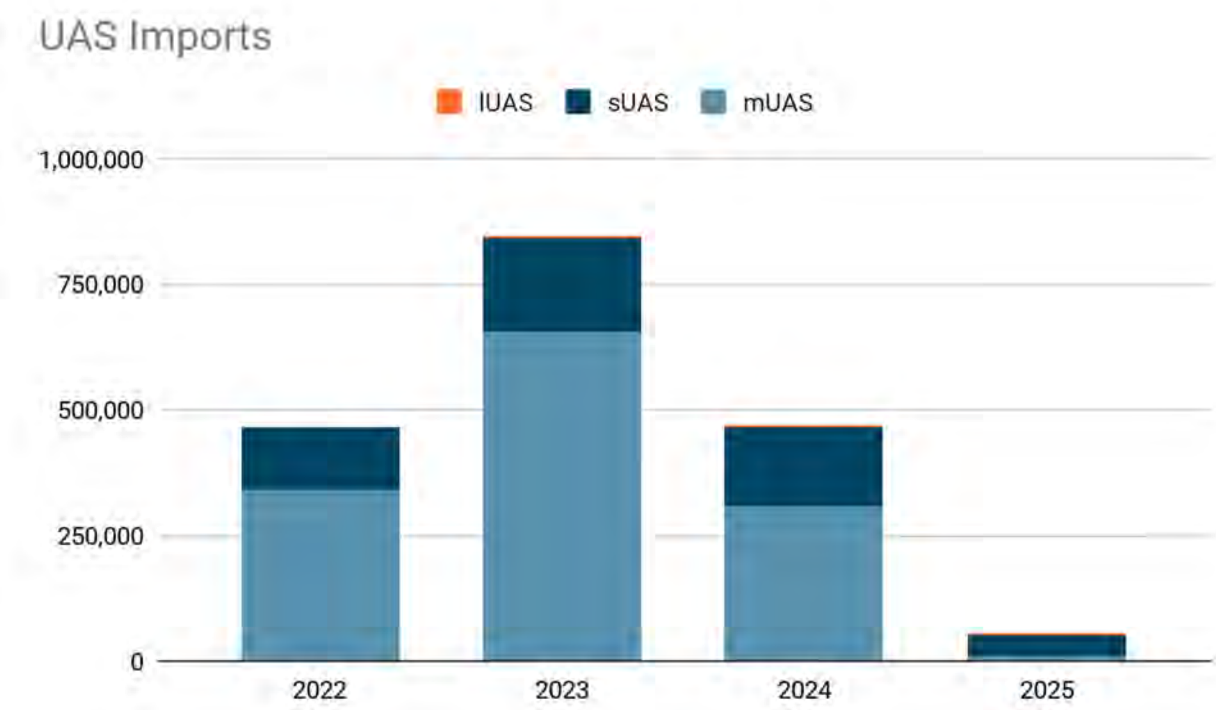
Harmonized Tariff Schedule of the U.S. – Unmanned Aircraft Classification Codes

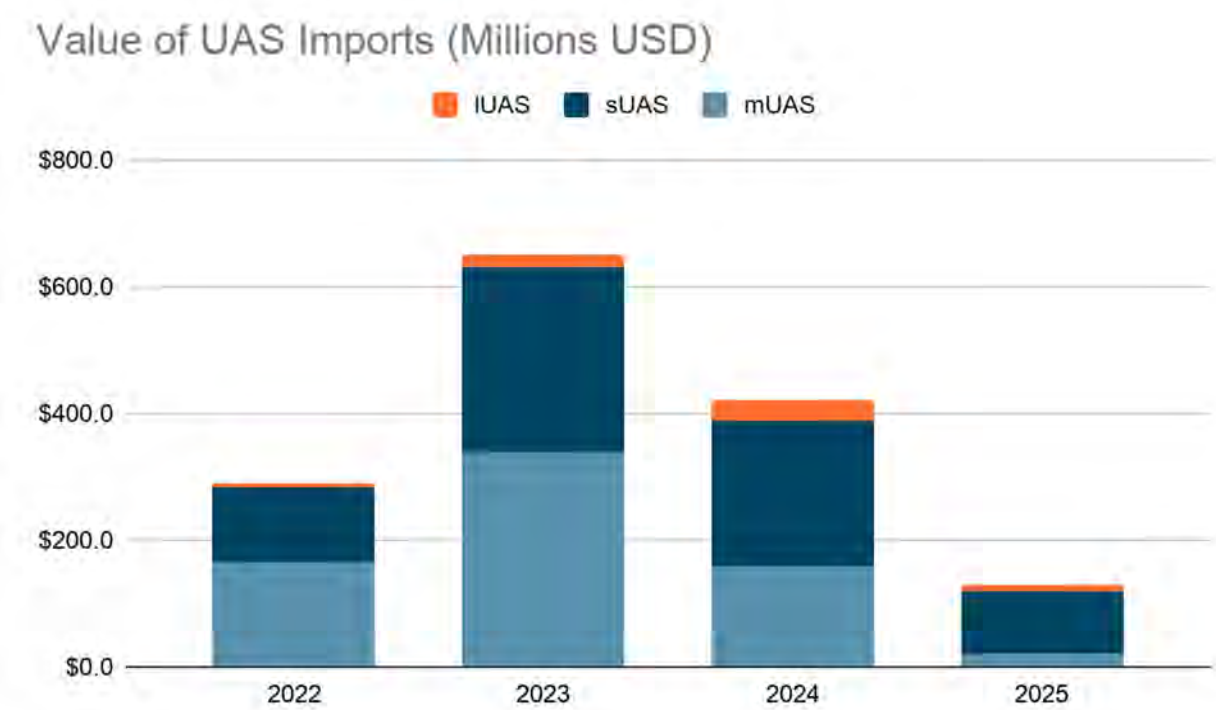
HTSUS Code	HTSUS Type	HTSUS Weight	UAS Classification
8806	Rc Unmanned Aircraft		
8806.1	Rc Unmanned Aircraft Carriage of Passengers	Unspecified	
8806.21	Rc Unmanned Aircraft	Not Over 250 g	mUAS
8806.22	Rc Unmanned Aircraft	250 g - 7 kg	sUAS
8806.23	Rc Unmanned Aircraft	7 kg - 25 kg	sUAS
8806.24	Rc Unmanned Aircraft	25 kg - 150 kg	lUAS
8806.29	Rc Unmanned Aircraft	> 150 kg	lUAS

In 2025, the United States imported over 56,000 UAS with a declared value of $260 million.[25] Both import volume and total value plummeted by nearly 75 percent compared to 2024. This contraction was primarily driven by a collapse in the mUAS segment which plummeted from 310,000 in 2024 to just 9,500 units in 2025. Accordingly, mUAS's share of UAS imports has also fallen dramatically, from two-thirds in 2024 to just 17 percent in 2025. Conversely, sUAS have become the dominant import category, commanding over three-quarters of both total unit volume and market value in 2025, a significant leap from their one-third market share the previous year.

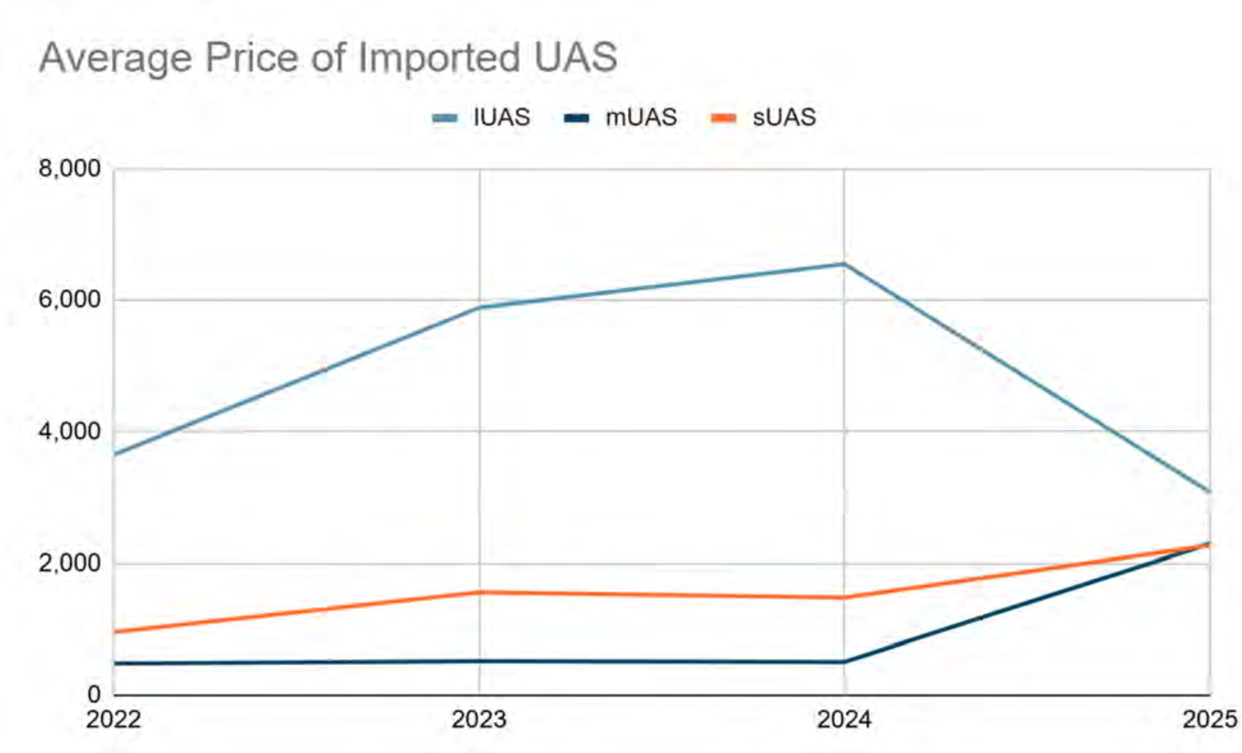
Beyond the mUAS collapse, both the sUAS and lUAS segments saw downward trends. Small UAS imports fell by over 70 percent from 155,000 units in 2024 to 42,000 in 2025, though their overall financial value held steady. Conversely, lUAS import volume dipped by just a quarter, but their total import value plummeted by two-thirds. This disproportionate value drop cut the average per-unit cost of an imported lUAS by half between 2024 and 2025.

[25] All value estimates are in U.S. dollars.


UAS Imports
lUAS
sUAS
mUAS
1,000,000
750,000
500,000
250,000
0
2022
2023
2024
2025


Value of UAS Imports (Millions USD)
lUAS
sUAS
mUAS
$800.0
$600.0
$400.0
$200.0
$0.0
2022
2023
2024
2025

The fall in UAS imports is following a downward trend since a peak in 2023. Following substantial increase from 2022 to 2023, both 2024 and 2025 saw a contraction of imported UAS, primarily driven by mUAS imports. Similarly, total values of UAS imports have fallen since its peak in 2023. This correlation has been driven by a relatively stable average value per aircraft imported between 2022 and 2024, which was between $1,000 and $2,000. However, the average value per aircraft increased drastically between 2024 and 2025 from $1,800 to $4,600. This seems to be primarily driven by sUAS share of imports and an increase in the average value per sUAS.



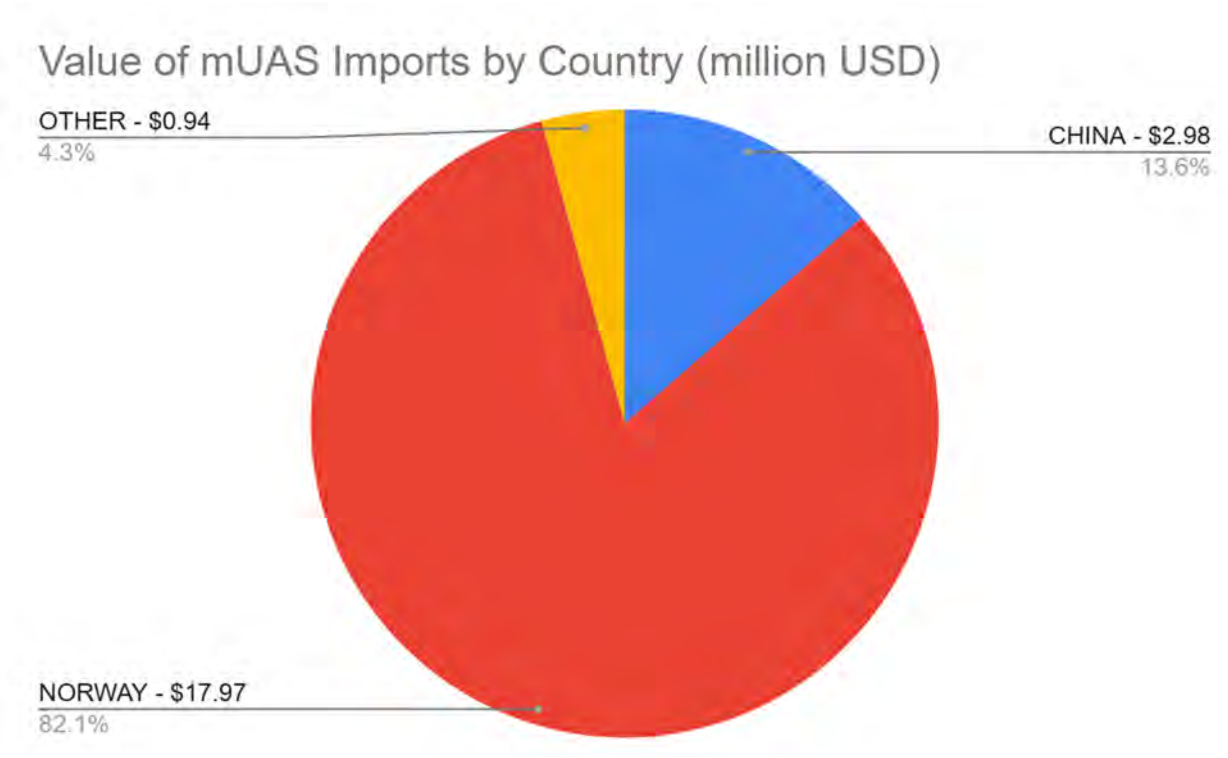
Micro Unmanned Aircraft Systems Imports

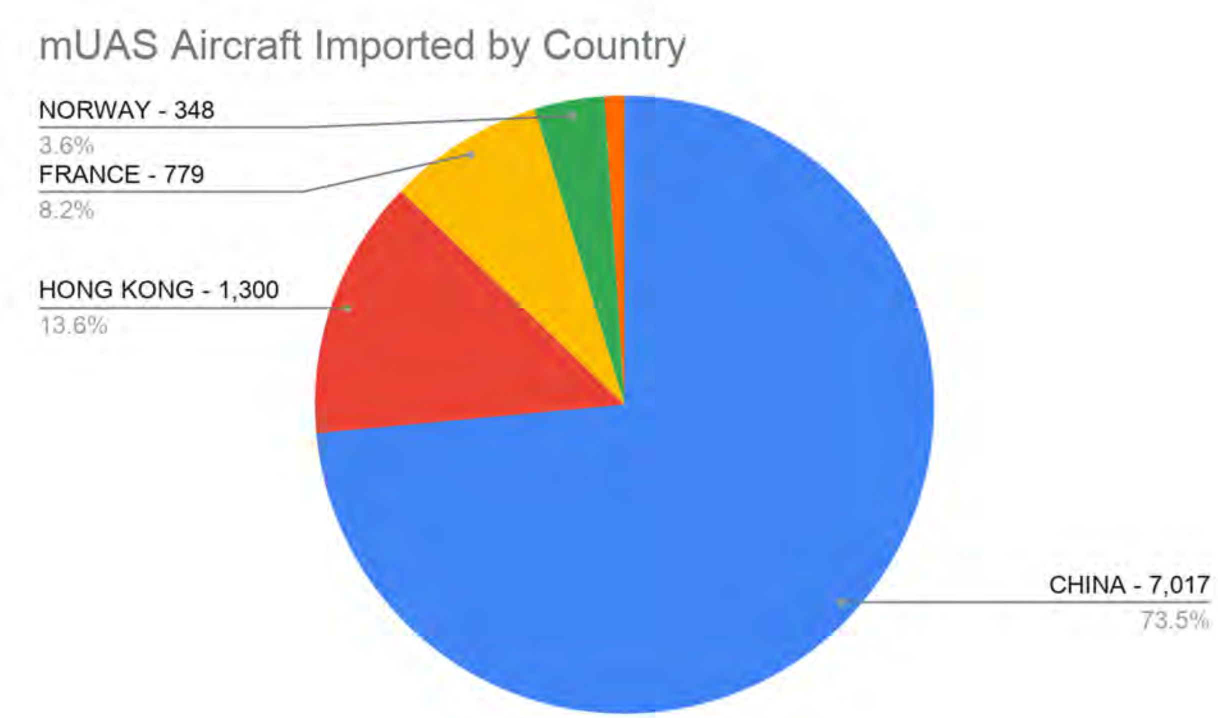
The market for mUAS imports has contracted drastically from its peak in 2023, dropping from 655,700 aircraft in 2023 to 9,500 in 2025, a 99 percent decline in 2 years. The vast majority of the decline came from a collapse in imports from Malaysia, which accounted for 80 percent of mUAS imports in 2023 and less than one percent of imports in 2025. This has restructured the broader global supply for mUAS by shifting the origin to China and Hong Kong, which now supplies almost 87 percent of imported mUAS.

With the fall in overall imports of mUAS, countries exporting fewer, higher-end mUAS are now significant players. Norway and France, both of whom held less than a one percent share of the imported mUAS, now account for as much as 12 percent of imports. Norway dominates the market in terms of value, accounting for $18.0 million out of the total market value of approximately $22.0

million. Remarkably, Norway achieves this dominance with a very small footprint of just 348 aircraft with more specialized high-end systems, yielding an extraordinary average unit price of approximately $51,646 in 2025.

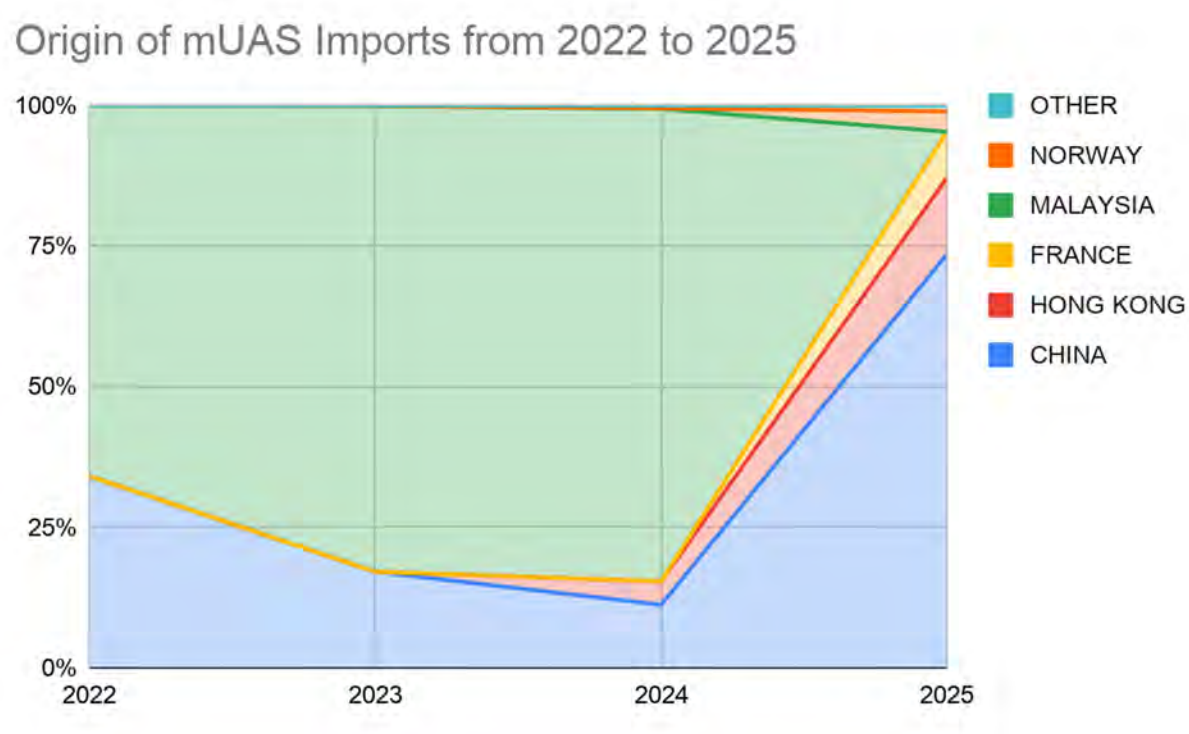
In contrast, China and Hong Kong follow a high-volume, low-cost strategy, leading the 2025 market in sheer quantity with 8,300 aircraft. However, this massive volume translates to just $3.3 million in total value due to a low average unit price of roughly $400, suggesting a focus on consumer-grade or low-cost mUAS. Looking at historical trends over time, China's market presence has undergone a dramatic contraction – its volume plummeted from 116,418 aircraft in 2022, to 112,005 aircraft in 2023, down to 34,767 in 2024, and reaching its current level of 7,017 aircraft in 2025.





U.S. Imports of Micro UAS by Country of Origin

Country	Value ($ Millions)	# of Aircraft	Average Price/Aircraft ($)
China	$ 3.0	7,017	$ 425
Hong Kong	$ 0.3	1,300	$ 224
France	$ 0.3	779	$ 391
Norway	$ 18.0	348	$ 51,646
Other	$ 0.3	100	$ 3,390

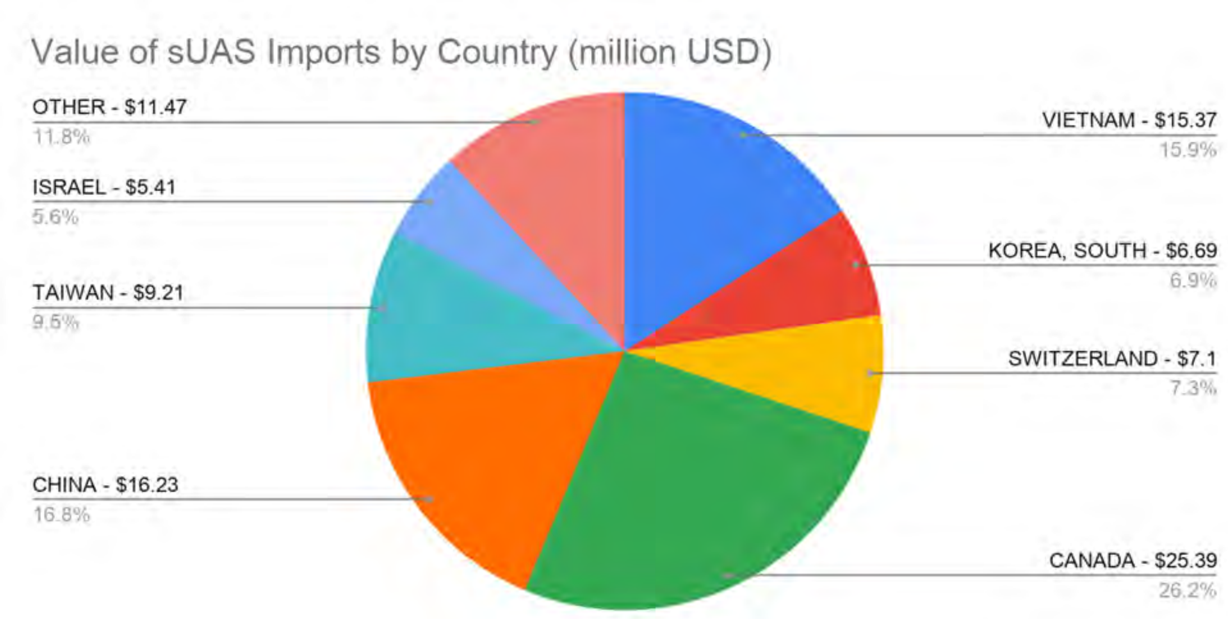


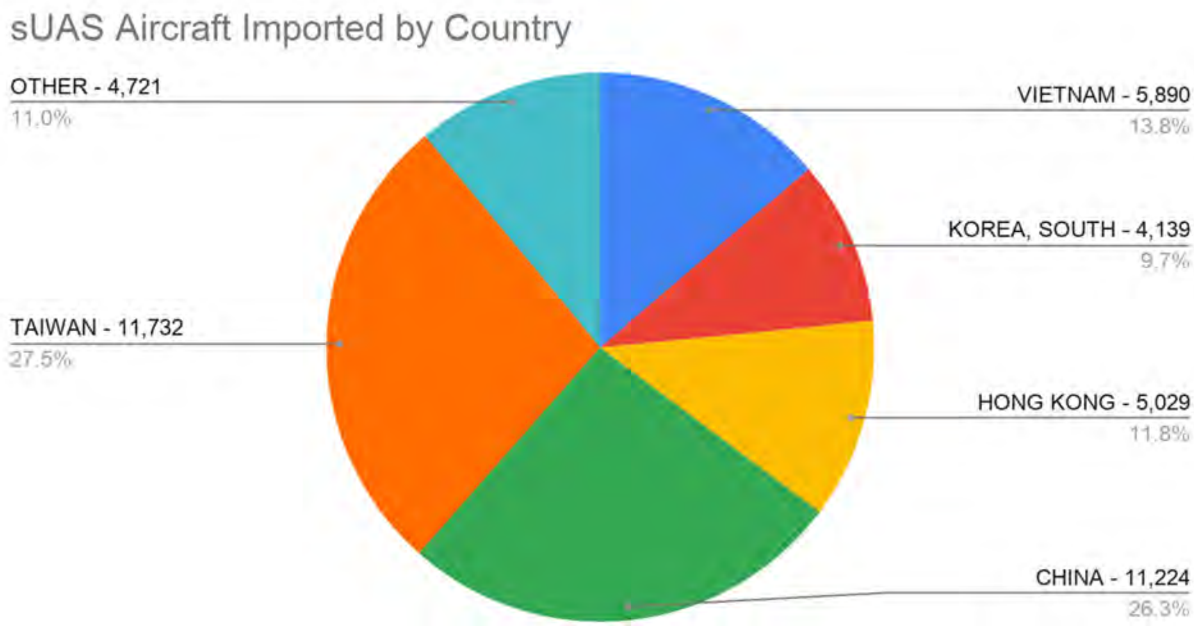
Small Unmanned Aircraft Systems Imports

Imports of sUAS have been trending down for the last couple of years. From a peak in 2023, sUAS imports have decreased from 373,800 aircraft to 85,500 in 2025, a 77 percent decrease over two years. The total value of sUAS imports has mirrored the decrease in aircraft since 2023. The average value per aircraft imported remained steady at around $3,000 per aircraft in 2023 and 2024 but increased to $4,500 in 2025. The increase in value per aircraft in 2025 was not enough to offset the drastic reduction in aircraft imported, leading to a sharp reduction to total value of sUAS imported.

Typically, more expensive drones (drones that sell for approximately $5,000 to $50,000) are considered enterprise-grade drones and are typically operated under Part 107 as business investments, although lesser expensive drones can be used in business operations as well. Differentiating between a high-end UAS and a lower-end UAS comes down to scope, capability and infrastructure. Higher-end UAS includes the aircraft, dedicated Ground Control Stations (GCS), advanced satellite networks for Command and Control, and complex data processing software. Lower-end UAS usually consists of the drone, a handheld radio controller, a basic camera, and a consumer smartphone or tablet acting as the screen.

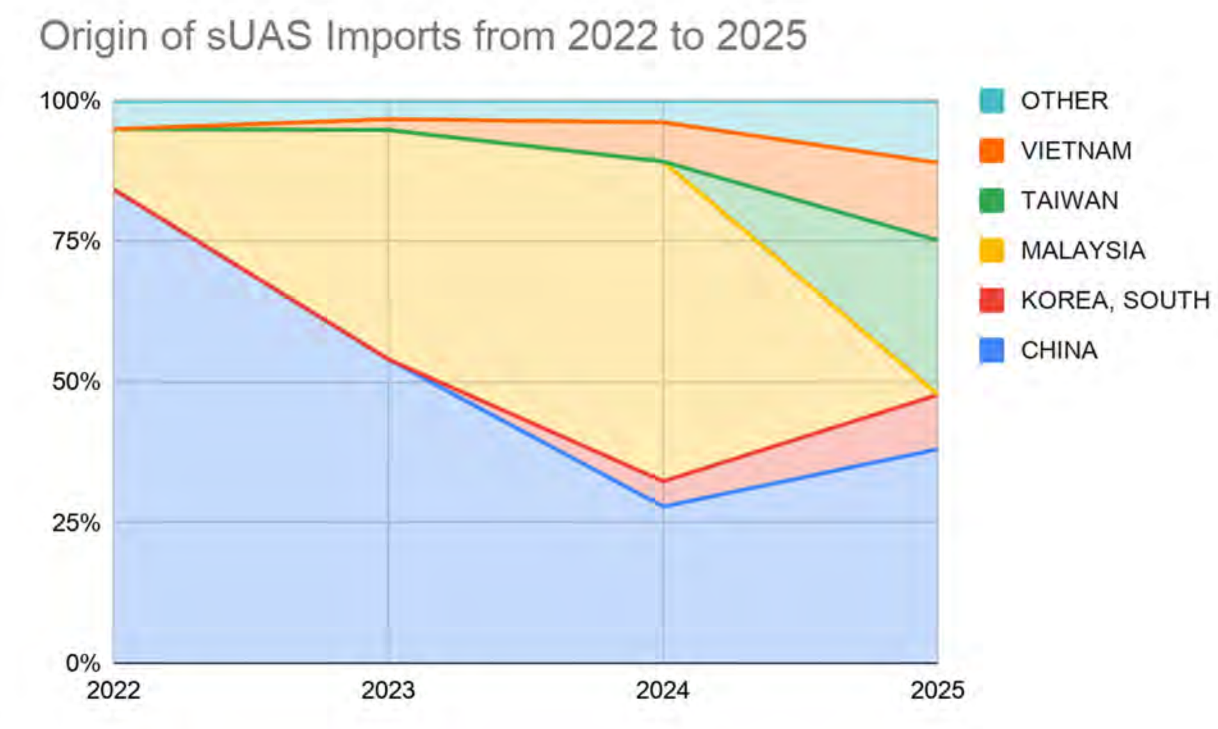
Parallel to trends seen in the mUAS sector, supply chains for sUAS underwent a massive relocation over the past year. In 2024, Malaysia dominated the market, supplying 56 percent of all sUAS imports; however, by 2025, its market share plummeted to less than 1 percent. Taking its place was South Korea, Taiwan, and Vietnam which surged ahead to collectively command the majority of imports at 51 percent. Meanwhile, the combined import share from China and Hong Kong saw a notable increase, rising from 28 percent in 2024 to 38 percent in 2025. Despite capturing a larger percentage of the import market, individual countries actually saw their total export volumes decline between 2024 and 2025. For instance, combined exports from China and Hong Kong plummeted by nearly two-thirds, dropping from 43,100 aircraft in 2024 to 16,200 in 2025. Similarly, Vietnam's exports dropped nearly fifty percent—falling from 10,800 aircraft to 5,800 aircraft over the same period—while South Korea exports dropped 40 percent, from 6,900 aircraft in 2024 to 4,100 aircraft in 2025. In contrast to the general downturn, some nations have experienced increased exports of higher-end sUAS. While China, South Korea, and Vietnam primarily export lower-cost sUAS, averaging around$1,500 per unit, countries like Canada, Israel, and Switzerland specialize in premium aircraft valued at $15,000 or more. Despite the drastic contraction in imports of sUAS to the U.S., high-value exporters continue to expand their U.S. market presence. Israel, for instance, saw its U.S. exports surge by 50 percent, albeit from a low baseline. Driven by high price points, Canada, Israel, and Switzerland now collectively command 40 percent of imports by value.





U.S. Imports of Small UAS by Country of Origin (0.05 lbs to 55 lbs.)

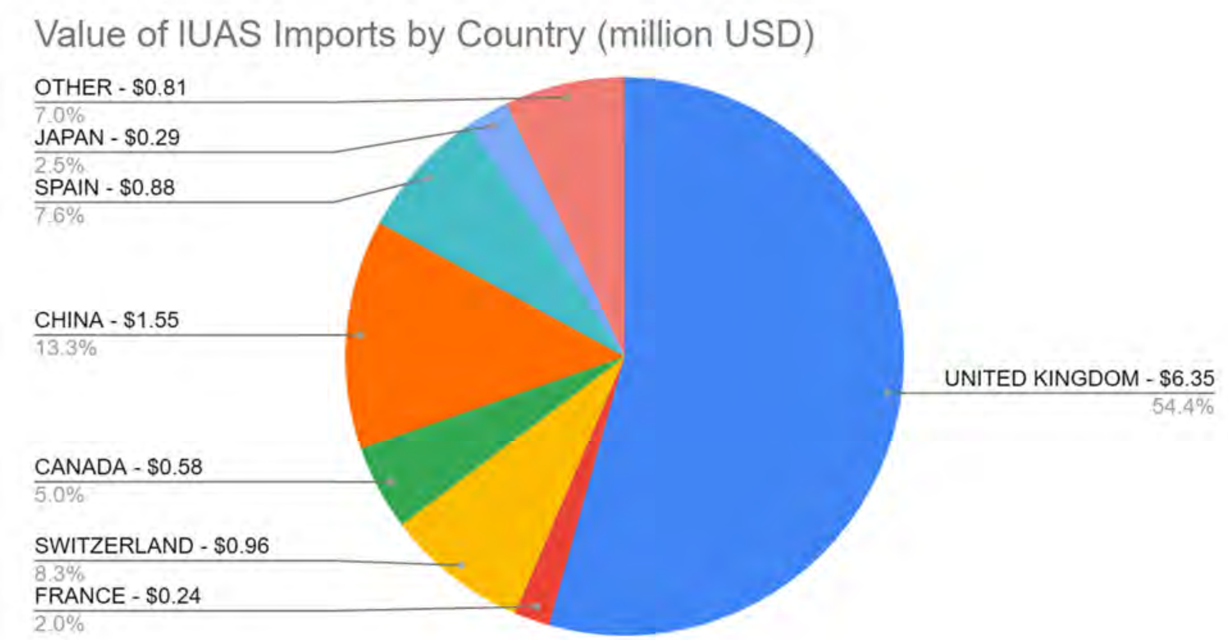
Country	Value ($ Millions)	# of Aircraft	Average Price/Aircraft
Vietnam	$ 15.37	5,890	$ 2,609
South Korea	$ 6.69	4,139	$ 1,616
Hong Kong	$ 1.87	5,029	$ 372
Switzerland	$ 7.10	490	$ 14,489
Canada	$ 25.39	400	$ 63,463
China	$ 16.23	11,224	$ 1,446
Taiwan	$ 9.21	11,732	$ 784
Israel	$ 5.41	245	$ 22,063
Other	$ 9.60	3,586	$ 2,676

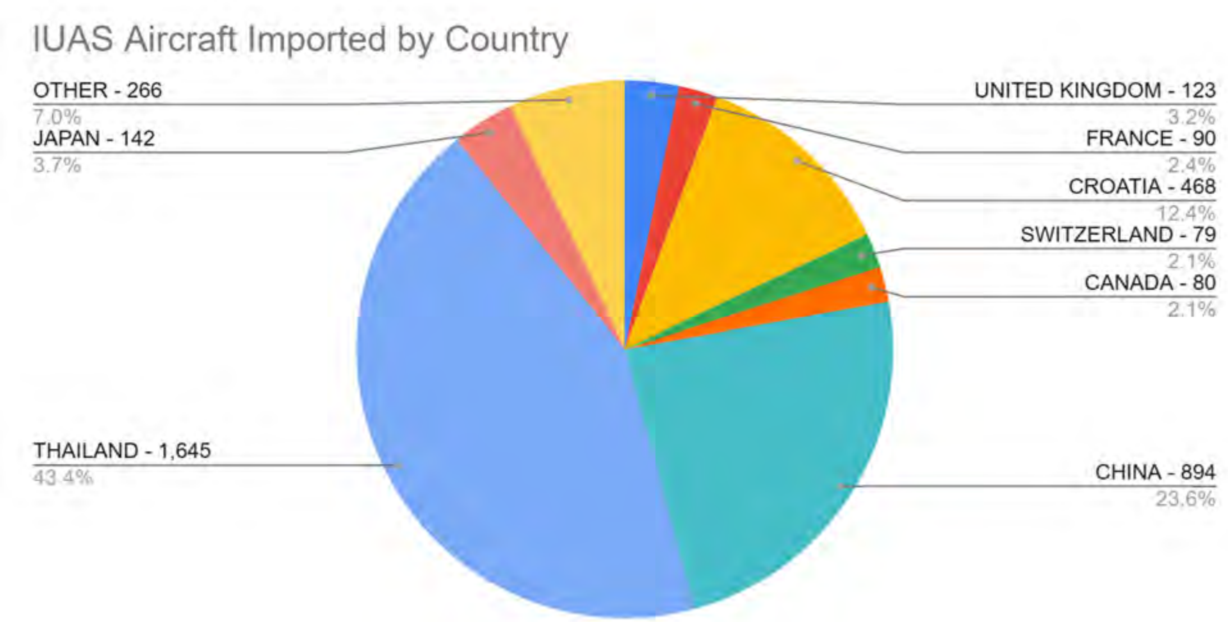


Large Unmanned Aircraft Systems Imports

Unlike mUAS and sUAS imports that peaked in 2023 and have since trended downward,, lUAS imports peaked in 2024. Imports of lUAS have decreased 25 percent from 5,144 aircraft in 2024 to 3,787 in 2025. This contraction was compounded by a steep drop in pricing, as the average value per aircraft plummeted by more than half, from $13,102 to $6,162. This has led to the overall value of lUAS imports dropping by two-thirds during this period. The reduction in lUAS imports is due to a slowing of Chinese exports of lUAS to the United States, both in terms of aircraft and average value. China's lUAS exports fell by three-quarters between 2024 and 2025 from 3,765 to 894. The impact of policy and legislation caused dwindling volumes and decreased prices which resulted in the total value of lUAS imports from China to decrease by 92 percent. American manufacturers are expected to fill the void. Some of the lUAS imports from China have been replaced by other countries. Croatia and Thailand have taken over the share of imports China has lost for a similar value per aircraft while Canada, France, and Japan have taken over imports from Taiwan at a similar value per aircraft. Countries producing higher-end lUAS with average values above $10,000 per aircraft have seen continued growth from 2024 to 2025. Spain, Switzerland, and the United Kingdom all had positive growth in lUAS exports to the United States between 2024 and 2025. This suggests that the lUAS market is likely growing, although a drop in imports from some countries may be foreign policy related rather than a market slowdown.

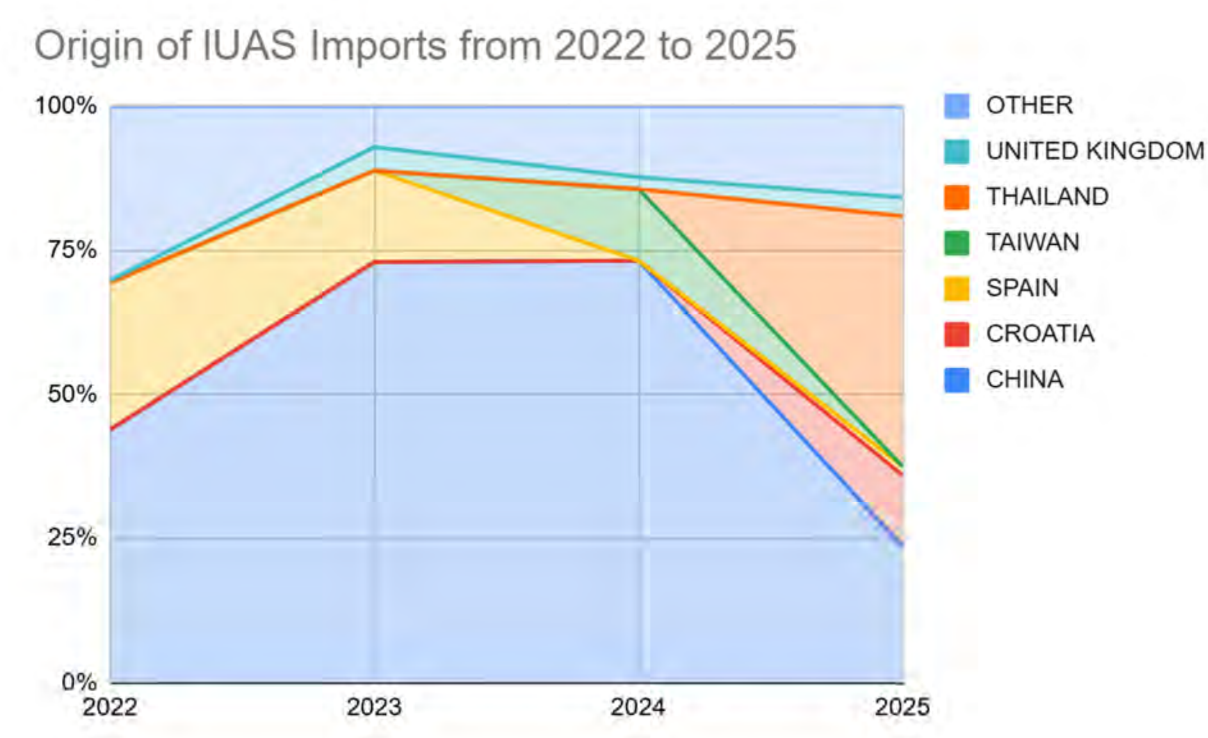
Another reason for the steeper drop in the average value of lUAS imports vis-a-vis the number of units imported may be attributed to a slowdown in what had been the fastest growing segment of the large drone market, which was agricultural spraying aircraft. As a slowdown of agricultural spraying aircraft commenced, sales of large non-agricultural large drone market surged. The end result was a large drop in the value of lUAS imports versus the number of units imported.





U.S. Imports of Large UAS by Country of Origin (> 55 lbs.)

Country	Value ($ Millions)	# of Aircraft	Average Price/Aircraft
United Kingdom	$ 6.35	123	$ 51,589
France	$ 0.24	90	$ 2,655
Croatia	$ 0.02	468	$ 36
Switzerland	$ 0.96	79	$ 12,205
Canada	$ 0.58	80	$ 7,221
China	$ 1.55	894	$ 1,738
Spain	$ 0.88	57	$ 15,516
Thailand	$ 0.11	1,645	$ 64
Japan	$ 0.29	142	$ 2,050
Other	$ 0.69	209	$ 3,304



Overall, UAS imports support trends from the UAS registries and inform the FAA's UAS forecasts. Demand for sUAS, both recreational and Part 107, are slowing. Higher prices of sUAS, indicated by a higher average value per aircraft, have increased substantially, creating demand destruction for recreational operators, who are the most price sensitive, and slowing demand from the less price sensitive professionals operating under Part 107. However, the market for lUAS has continued to grow despite the restructuring of lUAS global imports. Consequently, we expect only a transitory slowing of the lUAS market as the supply side of the market adapts to a changing environment to meet demand.

Advanced Air Mobility

AAM serves as an umbrella term for aircraft weighing more than 1,320 pounds that utilize advanced technologies–such as distributed propulsion, Vertical Takeoff and Landing (VTOL), powered lift, nontraditional power systems, or autonomous systems to transport passengers or cargo between locations[26]. The sector is split into two distinct sub-categories: Urban Air Mobility (UAM) and Regional Air Mobility (RAM). While UAM focuses on operations within dense urban areas and generally relies on powered-lift VTOL aircraft, RAM focuses on connecting rural communities and regional hubs. Unlike the novel flight profiles of UAM, RAM primarily adapts these advanced technologies to more conventional point-to-point transport operations.

To prepare for the safe and efficient integration of AAM into the NAS, FAA has led several foundational initiatives including the release of FAA UAM CONOPS Version 2.0 in April 2023, followed closely by the July 2023 publication of the FAA AAM Implementation Plan and the issuance of the final rule that adds the “powered-lift” definition to the regulations covering certain air carrier and commercial operations. In November 2024, FAA issued the final rule establishing the requirements for pilot certification and powered-lift operations and published an updated engineering brief for vertiport design standards in December 2024. In June 2025, the Executive Order “Unleashing American Drone Dominance” was issued. The Executive Order directs the creation of this initiative to accelerate the deployment and commercialization of uncrewed aircraft and of Electric Vertical Takeoff and Landing vehicles (eVTOL) pilot program[27]. This created a public-private partnership to accelerate the deployment of safe and lawful eVTOL operations in the United States including advanced air mobility, medical response, cargo transport and rural access. The program is not limited to eVTOL participants and actively incorporates program participants that are flying optionally piloted aircraft (OPA).

Despite a challenging environment from a wave of consolidations, several AAM Original Equipment Manufacturer (OEMs) including Joby Aviation, Archer Aviation, and Beta Technologies have made significant progress toward entry into service (EIS) and are planning to launch operations in the 2026-2027 timeframe. These OEMs have either entered or are close to entering the final phases of aircraft certification.

[26] For the definition of AAM see Federal Aviation Administration Reauthorization Act of 2024, sec. 951.

[27] Executive Order 14307: www.whitehouse.gov/presidential-actions/2025/06/unleashing-american-drone-dominance/

Drawing from FAA-sponsored AAM demand research conducted by The MITRE Corporation (MITRE)[28], a NAS-wide AAM demand forecast starting from Year 1 (defined as the EIS year[29] for the first expected AAM use case in the U.S.) through Year 6 (five years after EIS) is shown in the table below:

NAS-wide AAM Demand Forecast
(Airport Shuttle, Commuter Air Taxi, Cargo Feeder, and Medical Interfacility Transport)

Year	Number of MSA	Total Fleet	Annual Trips
1	2	7	24,600
2	8	30	111,600
3	15	80	334,800
4	19	169	737,300
5	24	254	1,108,400
6	32	367	1,615,000

We forecast 24,600 departures in its first full year, growing to over 334,000 departures annually by Year 3. As markets within specific Metropolitan Statistical Areas (MSA) for AAM services develop, the NAS-wide demand could continue to accelerate and reach over 1.6 million departures annually by the end of Year 6 (or around 4,400 daily flights). A key assumption in these projections is their dependence on the parallel expansion of infrastructure necessary to sustain AAM operations.

Among the three most-likely AAM use cases, it is projected that initial operations in the U.S. will commence with airport shuttles in a few major cities and cargo feeder operations in sparsely populated areas of the Western U.S. or among island communities, followed by air taxis, and then medical interfacility transport. This is because airport shuttles will have the most robust passenger demand traveling between fixed and concentrated points of interest (i.e., airports and downtown areas). Similarly, cargo operations already have established routes and infrastructure that AAM aircraft could replace the current operations. Urban air taxi flights for commuters, on the other hand, will be spread across more routes depending on where commuters live and work. Lastly, air medical interfacility transport is expected to lag airport shuttle and air taxi services due to a lower level of operator interest currently, as well as potential requirements for retrofitting aircraft for medical-use, additional time needed for aircraft certification, and deployment of charging infrastructure to support these operations.

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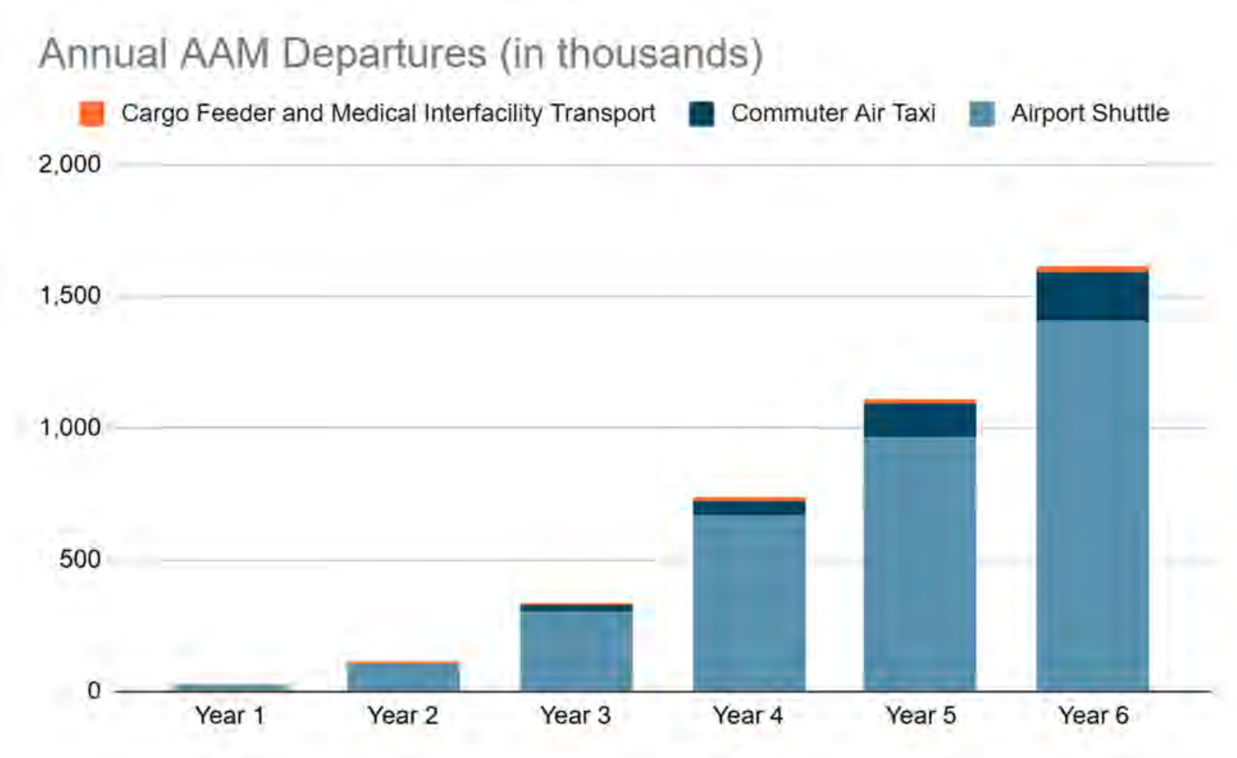
[28] "Advanced Air Mobility Demand Forecast for the National Airspace System", The MITRE Corporation, MP250135, Mclean, VA, March 2025.

[29] Year 1 does not have a definitive calendar year assigned as the timing for AAM operations to be granted EIS in the U.S. is still uncertain and is dependent on several external factors beyond the scope of the AAM demand research.

Expected AAM Services in Select Metropolitan Statistical Area (MSA) Markets

MSA	Airport Shuttle	Cargo Feeder	Commuter Air Taxi	Medical Interfacility Transport
Albuquerque		*		
Atlanta	*			*
Boston			*	
Chicago	*		*	*
Cincinnati				*
Dallas	*		*	*
Denver	*			*
Fort Lauderdale		*		
Grand Rapid		*		
Honolulu		*		
Houston	*		*	*
Indianapolis		*		
Las Vegas		*		
Los Angeles	*		*	
Madison		*		
Miami	*		*	
New York	*		*	
Oakland		*		
Orlando	*		*	*
Philadelphia				*
Phoenix		*		*
Pittsburgh				*
Riverside				*
Rochester		*		
Sacramento		*		
Salt Lake City				*
San Antonio		*		
San Francisco	*		*	
Seattle	*	*		
Tampa				*

The figure below shows the anticipated AAM departures for each forecast year, by use case.



The Airport Shuttle projections constitute the largest portion of the overall AAM forecasts for a couple of reasons. First, the Airport Shuttle is anticipated to be the initial AAM use case to be implemented, with demand increasing annually in tandem with the rise in airline passengers from the growing number of Metropolitan Statistical Areas that could adopt an AAM airport shuttle service. Secondly, the number and proportion of commuters likely to consider AAM are generally lower than the estimates for airline passengers.

The fleet sizes required to support the projected departures for the four use cases were estimated by assuming each AAM aircraft would conduct 28 trips per day, on average (two trips per hour over a 14-hour operating day) for the Airport Shuttle, Cargo Feeder, and Urban Air Taxi use cases and 2.5 trips a day for Medical Interfacility Transport use case. The projected NAS-wide AAM daily trips and the estimated fleet sizes to support those trips are shown in the table below. Based on announcements of expected fleet production capacities from several AAM OEMs, the fleet sizes needed to support the number of trips should be attainable and not be a constraining factor.

NAS-wide Projected AAM Daily Trips and Estimated Fleet Size

	Year 1 (EIS)	Year 2	Year 3	Year 4	Year 5	Year 6
Daily Trips	67	306	917	2,020	3,037	4,425
Fleet Size	7	30	80	169	254	367