Enclosure (14)

Miscellaneous Exhibits - Federal

a. National Plan of Integrated Airport Systems (NPIAS) 2019-2023

b. General Aviation Airports: A National Asset
   (1) Colorado (pg B-18)

c. Airport Improvement Program (AIP) Grants: Airport Sponsor Assurances

d. Airport Information – Meadow Lake
   (1) FAA 5010 Airport Master Record – Meadow Lake Airport (KFLY) – 01/04/18
   (2) FAA National Based Aircraft Inventory – Meadow Lake Airport (KFLY) (cover page) – 01/04/18

e. Current FAA Advisory Circulars Required for Use in AIP Funded and PFC Approved Projects

Enclosure 14a

Federal Aviation Administration
U.S. Department of Transportation

National Plan of Integrated Airport Systems (NPIAS) 2019–2023

Report of the Secretary of Transportation to the United States Congress
Pursuant to Title 49 U.S. Code, Section 47103

The NPIAS 2019–2023 report will be available online at: NPIAS Report to Congress

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

September 26, 2018

The Honorable Michael R. Pence
President of the Senate
Washington, DC 20510

Dear Mr. President:

Enclosed is the National Plan of Integrated Airport Systems (NPIAS) report for 2019-2023, pursuant to Title 49 U.S. Code, Section 47103, which requires the Secretary of Transportation to submit this report to Congress every 2 years.

The NPIAS report estimates the costs associated with establishing a system of airports that adequately meets the needs of civil aviation and supports the U.S. Department of Defense and the U.S. Postal Service. It draws selectively from local, regional, and State planning studies.

A similar letter has been sent to the Speaker of the U.S. House of Representatives.

Sincerely,

Elaine L. Chao

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

September 26, 2018

The Honorable Paul D. Ryan
Speaker of the House of Representatives
Washington, DC 20515

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Enclosure

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EXECUTIVE SUMMARY

The National Plan of Integrated Airport Systems (NPIAS) report for Fiscal Years (FY) 2019 to 2023 is submitted to Congress in accordance with title 49 United States Code (U.S.C.), section 47103. As required by the statute, the Federal Aviation Administration (FAA) "...shall maintain the plan for developing public-use airports in the United States." The statute also requires that:

> "The plan shall include the kind and estimated cost of eligible airport development the Secretary of Transportation considers necessary to provide a safe, efficient, and integrated system of public-use airports adequate to anticipate and meet the needs of civil aeronautics, to meet the national defense requirements of the Secretary of Defense, and to meet identified needs of the United States Postal Service."

The FAA does not control which routes or airports the airlines serve. Nor does the FAA dictate or limit where privately owned aircraft can fly. Rather, the FAA's responsibility is to work with State and local units of government, as well as other stakeholders, to ensure effective planning of a safe and efficient system of airports to support the needs of the civil aviation industry.

Accordingly, this report identifies the airports included in the national airport system, the roles they currently serve, and the amounts and types of airport development eligible for Federal funding under the Airport Improvement Program (AIP) over the next 5 years. The FAA has been publishing the NPIAS since 1984.

This edition identifies 3,328 public-use airports[1] (3,321 existing and 7 proposed) that are important to national air transportation and estimates a need for approximately $35.1 billion in AIP-eligible airport projects between 2019 and 2023. This is an increase of $2.4 billion (7 percent) from the report issued 2 years ago. Figure 1 identifies total development costs from 1984-2019. These estimates reflect the costs at the time each report was prepared and do not reflect constant dollars. The development of primary and nonprimary airports continue to be based on

Figure 1: Development Totals, 1984-2019

[1]The word "airport," as identified in this report, includes landing areas developed for conventional fixed-wing aircraft, helicopters, and seaplanes.

eligible and justified needs and priorities consistent with the role of the airport in the national airport system.

Airport capital development needs are driven by current and forecasted traffic, use and age of facilities, and changing aircraft technology, which requires airports to update or replace equipment and infrastructure. Based on actual and projected aeronautical activity trends, AIP-eligible development needs are expected to increase at large and medium hubs and regional airports, but development needs at all other airport types are expected to increase more slowly or remain consistent with previous levels. Capacity-related development continues to decrease, while development to reconstruct pavement, bring an airport up to design standards, and expand or rehabilitate terminal buildings continue to increase. The increase in terminal projects reflected in this report is principally the result of projects at several large and medium hub airports.

After more than a decade, most major airport capacity projects and runway safety area (RSA) initiatives have successfully concluded. This included airport development to increase airport capacity, resulting in 23 major airports completing 27 airfield projects (new runways, runway extensions, or airfield reconfigurations), and to improve virtually all the nonstandard RSAs at commercial service airports to meet dimensional standards or an equivalent level of safety. A new national initiative to improve nonstandard surface geometry is now well underway to improve nonstandard airfield geometry to prevent runway incursions. While this report includes preliminary costs of almost $300 million through 2023 for this initiative, the next NPIAS report will more fully capture development costs as the FAA continues reviewing and refining solutions.

The FAA considers development included in the NPIAS in the Airports Capital Improvement Plan process. While all of these 5-year capital estimates are AIP-eligible, some may be funded by other sources, including Passenger Facility Charge (PFC) revenues or other airport revenue or financing. Funds for airport development are derived from a variety of sources, including Federal/State/local grants, bond proceeds, PFCs, airport-generated funds (landing and terminal fees, parking, aviation fuel, and concessions revenues), and tenant and third-party financing. The availability of funding sources (and their adequacy to meet needs) varies with each type of airport and levels of aeronautical activity.

Cost estimates in the NPIAS are obtained primarily from airport master and State system plans prepared by planning and engineering firms for airport sponsors and local and State aeronautical agencies. As these plans are typically funded in part by the FAA, the FAA ensures that they are consistent with FAA forecasts of aeronautical activity, follow FAA guidelines, and have been reviewed and accepted by FAA planners who are familiar with local conditions. Efforts were made to obtain realistic estimates of development needs that coincide with local and State capital improvement plans. The estimates only include development undertaken by airport sponsors (as opposed to nonpublic projects undertaken by airport tenants, such as airlines and air cargo operators). The development reflected in this report is based on planning documents and information available through 2017.

The NPIAS cost estimates are based upon planning estimates developed prior to design and full environmental evaluation, which may introduce additional costs. These development estimates

do not include contingency costs (increases in cost based on changes in design, construction uncertainty, or environmental mitigation) or normal price escalation due to inflation (annual increase in costs).

This report explains how the NPIAS supports the U.S. Department of Transportation's (DOT) and the FAA's goals of safety, infrastructure, innovation, and accountability. These goals are identified in chapter 2 of this report, which addresses the condition and performance of the national airport system, highlighting six topic areas: safety, capacity, environment, pavement condition, surface accessibility, and financial performance.

Overall, the findings are favorable, indicating the system is safe, convenient, and well maintained. For the largest and busiest airports, the majority of capital improvements are funded by nonfederal sources, such as airport revenues, bond proceeds and PFC revenues. Even for smaller airports, capital funding sources are diverse and well-leveraged. The majority of airports in the national airport system have adequate airport capacity and few delays. However, there are airports that consistently experience delays and a small percentage of airports that are seeing growing constraints in the terminal and landside areas.

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CHAPTER 1: AIRPORT SYSTEM COMPOSITION

OVERVIEW

The national airport system, envisioned when civil aviation was in its infancy, has been developed and nurtured by close cooperation with airport sponsors and other local agencies, as well as Federal and State agencies. Airports are critical to the national transportation system and contribute to a productive national economy and international competitiveness. The enduring principles guiding Federal involvement in the national airport system were articulated more than 25 years ago and were subsequently reaffirmed by the FAA and the aviation industry in 2011 as part of the national review of the airport system. To meet the demand for air transportation, airports and the national airport system should have the following attributes:

- Airports should be safe and efficient, located where people will use them, and developed and maintained to appropriate standards;
- Airports should be affordable to both users and the Government, relying primarily on producing self-sustaining revenue and placing minimal burden on the general revenues of the local, State, and Federal Governments;
- Airports should be flexible and expandable and able to meet increased demand and accommodate new aircraft types;
- Airports should be permanent with assurance that they will remain open for aeronautical use over the long term;
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation, the environment, and the requirements of residents;
- Airports should be developed in concert with improvements to the air traffic control system and technological advancement;
- The airport system should support a variety of critical national objectives, such as defense, emergency readiness, law enforcement, and postal delivery; and
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically by having most of the population within 20 miles of a NPIAS airport.

In addition to the above listed principles, a guiding principle for Federal infrastructure investment, as stated in Executive Order 12893,[2] is that Federal investments should be cost beneficial.[3] This Executive Order also included other key principles that the FAA supports through its administration of the NPIAS, including support of State and local planning and information management systems; support for private sector participation; and support for effective administration of grant programs like AIP.

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[2]Executive Order 12893, Principles for Federal Infrastructure Investments, was issued in the Federal Register on January 31, 1994, and has not been revoked. See: http://www.archives.gov/federal-register/executive-orders/pdf/12893.pdf.

[3]The FAA implements these principles by using program guidance to ensure the effective use of Federal aid. A national priority system guides the distribution of funds, supplemented when necessary, by specific requirements for additional analysis or justification. Moreover, virtually all development projects must be justified based on existing or reasonably anticipated civil aeronautical activity levels.

While the Nation's airports have evolved differently over the past decades, they are an integral part of U.S. lifestyle and commerce. Some airports are large in size and have multiple runways. Others are relatively small and may only need a short, single runway to serve a critical purpose. The role of an airport is not necessarily limited by its size, location, or facilities. Airports fulfill very diverse roles—from moving people and cargo and serving agricultural needs, to providing critical access to remote communities, including emergency medical services, to supporting private transportation using the smallest piston aircraft to the most sophisticated jets, and providing aeronautical access to manufacturers/assemblers and repair stations that support airlines and operators of all sizes in a global aerospace marketplace.

The latest statistics indicate 610,796 pilots, 213,050 active general aviation aircraft, and 18,203 air carrier aircraft utilize 19,627 landing areas, including private use (closed to the public) and public-use (open to the public) facilities. Listed below (Table 1) is the breakdown of private- and public-use landing areas in the United States by type of facility.

The FAA works closely with State aviation agencies and local planning organizations to identify public-use airports that are important to the system for inclusion in the NPIAS. About 65 percent (3,321) of the 5,099 public-use airports are included in the NPIAS. There are 1,778 existing public-use airports that are not included in the NPIAS, generally because they do not meet the minimum entry criteria,[4] are located at inadequate sites, cannot be expanded or improved to provide a safe and efficient airport, or are located within 20 miles of another NPIAS airport.

Table 1: Numbers and Types of Existing Airports in the United States (as of May 2018)

Type of Facility	Total U.S. Facilities	Private-Use Facilities	Public-Use Facilities	Existing NPIAS Facilities
Airport	13,117	8,302	4,815	3,273
Heliport	5,842	5,782	60	10
Seaplane Base	507	292	215	38
Ultralight	112	109	3	
Gliderport	35	30	5	
Balloonport	14	13	1	
Total	**19,627**	**14,528**	**5,099**	**3,321**

All commercial service airports[5] are included, and selected general aviation airports that meet requirements are included in the NPIAS. Ninety-eight percent of the facilities included in the NPIAS are airports. Throughout this report, the term "airport" includes landing areas developed for conventional fixed-wing aircraft, helicopters, and seaplanes.

The NPIAS report identifies the airports included in the national airport system, the roles they serve, and the amounts and types of AIP-eligible airport development needed over the next

[4]The NPIAS entry criteria is contained in FAA Order 5090.3C, Field Formulation of the National Plan of Integrated Airport Systems (NPIAS), available online at: http://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/12754.
[5]Privately owned airports with scheduled air carrier service are not eligible for designation as a commercial service airport (i.e., Branson Airport in Branson, Missouri).

5 years. An airport must be included in the NPIAS to be eligible to receive a grant under the AIP. Because the capital development needs have historically exceeded available AIP resources, airport development needs included in the NPIAS may ultimately be funded by other funding sources, such as PFCs or other airport revenue or financing.

AIRPORTS IN THE NPIAS

The NPIAS contains 3,328 airports, including 3,321 existing and 7 proposed airports that are anticipated to open within the 5-year period covered by this report. The proposed airports are classified in the same categories as existing airports. Approximately 98 percent (3,249) of the NPIAS airports are owned by public entities (generally city, county or State) and 2 percent (72) are privately owned airports.

Airports are grouped by statute into two major categories: primary and nonprimary as shown in Figure 2 below. Primary airports are defined in the FAA's authorizing statute as public airports receiving scheduled air carrier service with 10,000 or more enplaned passengers per year. There are 380 primary airports based on calendar year (CY) 2016 data. Primary airports are further grouped into four categories defined in statute: large hub, medium hub, small hub, and nonhub.

Nonprimary airports primarily support general aviation aircraft. The nonprimary category includes nonprimary commercial service airports (public airports receiving scheduled passenger service and between 2,500 and 9,999 enplaned passengers per year), general aviation airports, and reliever[6] airports. There are 2,941 nonprimary airports. These airports are further grouped into five categories: national, regional, local, basic, and unclassified. Appendix C of this report contains the airport definitions contained in both statute and policy that are used in this report.

[6]The term "reliever" is defined in the FAA's authorizing statute at 49 U.S.C., section 47102, as "an airport the Secretary designates to relieve congestion at a commercial service airport and to provide more general aviation access to the overall community." The term "reliever" is relevant in a small number of contexts but is increasingly problematic because only a small number of commercial service airports still experience significant congestion. Regardless, because the term is still defined and used in statute, the FAA continues to report the current designations in this report.

Figure 2: NPIAS Airports by Category and Role

Table 2 reflects the number of existing NPIAS airports by category, as well as the percentage of enplanements, based aircraft, total aircraft operations, and total development.

Table 2: Activity and Development at NPIAS Airports

Number of Airports	Airport Category	Percentage of NPIAS Airports	Percentage of 2016 Total Enplanements[1]	Percentage of Aircraft Based at NPIAS Airports[2]	Percentage of Total Aircraft Operations	Percentage of NPIAS Cost[3]
30	Large Hub	1	72.48	0	13.1	23.5
31	Medium Hub	1	15.87	1.7	4.9	10.5
72	Small Hub	2	8.21	4.8	6.9	11.9
247	Nonhub	7	3.26	10.2	10.7	15.2
380	**Primary Subtotal**	**11**	**99.83**	**16.7**	**35.6**	**61.1**
88	National	3		10.5	8.4	5.3
492	Regional	14		22.3	24.5	12.1
1,278	Local	40		21.3	23.2	14.5
840	Basic	25		3.4	5.9	6.2
243	Unclassified	7		1.1	2.3	0.03
2,941	**Nonprimary Subtotal**	**89**	**0.13**	**58.6**	**64.3**	**38.1**
3,321	**Total NPIAS Airports**	**100**	**99.96**	**75.3**	**100**	**99.2**

[1]The 126 nonprimary commercial service airports account for 0.07 percent of enplanements. The 2,815 nonprimary airports account for 0.06 percent of enplanements. The remaining 0.04 percent occurred at non-NPIAS airports.
[2]Based on active general aviation fleet of 211,793 aircraft in 2016. The remaining aircraft are based at non-NPIAS airports.
[3]These costs are rounded and do not include the cost for new airports (1 percent).

PRIMARY AIRPORTS

The 380 primary airports are grouped into four categories defined in statute: large, medium, small, and nonhub airports. Primary airports are eligible to receive an annual apportionment based on the number of enplaned passengers. CY 2017 enplanements determine FY 2019 service levels and passenger apportionments. Figure 3 shows the locations of the primary airports.

As shown in table 2, primary airports account for 99 percent of passenger enplanements, 36 percent of aircraft operations, and 61 percent of development contained in the NPIAS with the type of development needed varying by hub category. Further information on the various types of development is included in chapter 4.

Figure 3: Primary Airports

Large Hubs (30)

Large hubs are those airports that each account for 1 percent or more of total U.S. passenger enplanements.[7] The 30 large hub airports account for 72 percent of all passenger enplanements. Some of these passengers originate in the local community, and some are connecting passengers transferring from one flight to another. Nine of the large hub airports primarily serve passengers

[7]The FAA's use of the term "hub" airport is slightly different from that of airlines, which use it to denote an airport with significant connecting traffic by one or more carriers. The hub categories used by the FAA are defined in 49 U.S.C., section 40102.

that originate in the community or who are traveling specifically to those destinations.[8] Many other large hub airports support higher percentages of passengers who are traveling through the airport to connect to another flight, rather than starting or ending their travel at these airports. Such connecting traffic can account for more than 65 percent of passenger activity at the airport, such as Charlotte/Douglas International and Hartsfield-Jackson Atlanta International.

Large hub airports tend to concentrate on commercial airline and freight operations and have limited general aviation activity. Two large hub airports have an average of 170 based aircraft (Honolulu's Daniel K. Inouye International and Las Vegas McCarran International), and Salt Lake City International has more than 325 based aircraft, but the other 27 large hubs have an average of 29 based aircraft. Thus, locally based general aviation aircraft play a small role at most large hub airports.

The Nation's air traffic delay problems tend to be concentrated at certain large hub airports, particularly in the New York City area. Delays occur primarily during inclement weather conditions (i.e., thunderstorms or clouds that reduce ceiling and visibility) or when runway or airspace capacity is reduced below what is needed to accommodate traffic levels. Gate availability and airline schedules that exceed optimal airport capacity can also result in delays. Because of the number of connecting flights supported by these airports, delays at these airports can quickly ripple throughout the system causing delays at other airports nationwide.

Medium Hubs (31)

Medium hubs are defined in statute as airports that each account for between 0.25 percent and 1 percent of total U.S. passenger enplanements. The 31 medium hub airports account for 16 percent of all U.S. enplanements. Medium hub airports usually have sufficient capacity to accommodate air carrier operations and a substantial amount of general aviation activity. One medium hub airport (John Wayne Airport-Orange County) has 489 based aircraft, and three medium hub airports (Metropolitan Oakland International, Dallas Love Field, and William P. Hobby in Houston) each have an average of 270 based aircraft. The remaining 27 medium hub airports have an average of 81 based aircraft.

Small Hubs (72)

Small hubs are defined in statute as airports that enplane 0.05 percent to 0.25 percent of total U.S. passenger enplanements. There are 72 small hub airports that together account for almost 8 percent of all enplanements. Less than 25 percent of the runway capacity at small hub airports is used by airline operations so these airports can accommodate a great deal of general aviation activity, with an average of 128 based aircraft at each airport. These airports are typically uncongested and do not have significant air traffic delays. One small hub airport, Fairbanks International, has 570 based aircraft. Three small hub airports—Fairbanks International, Cyril E. King in Charlotte Amalie, Virgin Islands, and Orlando Sanford International—have an average of 380 based aircraft. The remaining 68 small hub airports have an average of 124 based aircraft.

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[8]The nine include the major airports in Boston, Fort Lauderdale, Orlando, San Diego, Tampa, Portland (Oregon), and Las Vegas, as well as New York LaGuardia and Ronald Reagan Washington National.

Nonhub Primary (247)

Commercial service airports that enplane less than 0.05 percent of all commercial passenger enplanements but have more than 10,000 annual enplanements are categorized as nonhub primary airports. There are 247 nonhub primary airports that together account for 3 percent of all enplanements. These airports are also heavily used by general aviation aircraft with an average of 87 based aircraft.

NONPRIMARY AIRPORTS

Nonprimary airports are mainly used by general aviation aircraft and include 126 nonprimary commercial service, 261 relievers, and 2,554 general aviation airports. Nonprimary airports are divided into five categories based on existing activity (e.g., the number and types of based aircraft and volume and types of flights), geographic factors, and public interest functions. These categories, illustrated in figure 4, are national, regional, local, basic, and unclassified.

The 2,941 nonprimary airports included in the NPIAS account for 59 percent of the active general aviation fleet, 64 percent of aircraft operations, and 38 percent of the AIP-eligible development through 2023. Development at nonprimary airports tends to focus on pavement reconstruction (runway, taxiway, and apron) and improvements to meet current airport design standards.

Figure 4: Nonprimary Airports

In preparation for the biennial report, the FAA reexamined the roles of nonprimary airports and coordinated with airport sponsors and State aviation agencies. The FAA continues to work with

industry to identify users of these facilities and their associated role in the State and national airport system.

As specialized functions emerge, the FAA will work with industry to incorporate them into the NPIAS categories. Each airport's category and role is reflected in appendix A. The next review of airport roles will be in FY 2020 in preparation for the 2021 NPIAS report due September 2020. Future development of nonprimary airports will continue to be based on eligible and justified needs and priorities consistent with the role of the airport in the national airport system.

National (88)

National airports are located in metropolitan areas near major business centers and support flying throughout the Nation and the world. These airports provide pilots with attractive alternatives to the busy primary airports. In fact, the FAA has designated 70 of these facilities as relievers for primary airports. National airports have very high levels of activity with many jets and multiengine propeller aircraft. Four national airports—Fort Lauderdale Executive, Phoenix Deer Valley, Centennial Airport in Denver, and Addison in Dallas—have more than 600 aircraft based at their airport. National airports average 249 total based aircraft, including 30 jets. The 88 national airports account for 5 percent of the development in this report.

Regional (492)

Regional airports are also in metropolitan areas and serve relatively large populations. These airports support regional economies with interstate and some long-distance flying and have high levels of activity, including some jets and multiengine propeller aircraft. Fifty-three of these airports have limited air carrier service, and the FAA has designated 140 regional airports as relievers for primary airports. Four regional airports (Falcon Field in Mesa, Arizona; Livermore Municipal in Livermore, California; Montgomery-Gibbs Executive in San Diego, California; and Caldwell Industrial in Caldwell, Idaho) each have more than 400 based aircraft. Regional airports average about 92 total based aircraft, including 3 jets. The 492 regional airports account for 12 percent of the development in this report.

Local (1,278)

Local airports are a critical component of our general aviation system, providing communities with access to local and regional markets. Typically, local airports are located near larger population centers but not necessarily in metropolitan areas. They also accommodate flight training and emergency services. These airports account for 39 percent of all NPIAS airports and have moderate levels of activity with some multiengine propeller aircraft. About 73 of these airports have limited air carrier service. Two local airports have more than 200 based aircraft (Nampa Municipal in Idaho and Birchwood Airport in Alaska). Local airports average about 34 based propeller-driven aircraft and no jets. The 1,278 local airports account for 14 percent of the development in this report.

Basic (840)

Basic airports fulfill the principal role of a community airport providing a means for private general aviation flying, linking the community with the national airport system, and making other unique contributions. In some instances, the airport is the only way to access the community and provides emergency response access, such as emergency medical or fire fighting and mail delivery. These airports have moderate levels of activity with an average of nine propeller-driven aircraft and no jets. Many of these airports are located in rural areas. The 840 basic airports account for 6 percent of the development in this report.

Unclassified (243)

These airports tend to have limited activity and include public- and private-owned airports. There are 188 public-owned unclassified airports. Of those, 57 have no based aircraft, 75 have between 1 and 4 based aircraft and 56 have between 5 and 8 based aircraft.

There are 55 privately owned unclassified airports. Of those, 23 are privately owned airports designated as relievers that do not meet existing criteria for AIP funding. About half of these airports have fewer than 50 based aircraft (compared to the long-established threshold of 100 based aircraft for designation as a reliever). Also included in the 55 are 32 privately owned general aviation airports. These airports do not meet the criteria for designation as a reliever and have never received an AIP development grant. These airports have been in the NPIAS for at least 20 years, and there is no indication they will ever meet the requirements to become classified. Over the next 2 years, the FAA will review these locations for continued inclusion in the NPIAS.

Two hundred and sixteen of the airports identified as unclassified airports in 2017 remain unclassified in this report. The activity or circumstances changed for 56 airports. The activity dropped at 27 airports, and they became unclassified. Activity increased at 29 airports, and they went from unclassified to basic (26), local (2), or regional (1).

NEW AIRPORTS (7)

The NPIAS identifies seven proposed airports, two primary and five nonprimary, that are anticipated to be developed and open over the 5-year period covered by this report[9]. One of the proposed new primary airports to help meet future aviation demand would be in the Chicago area and is still in the planning stages. The airport sponsor is currently evaluating methods for developing, financing, and operating the proposed airport. The other new primary airport will replace an existing commercial service airport in Williston, North Dakota, where airlines and general aviation are experiencing constraints due to increased activity caused by regional economic growth attributed to oil and natural gas production.

The five nonprimary airports are in Angoon, Alaska; Newtok, Alaska; Noatak, Alaska; Sioux Center, Iowa; and Griffin, Georgia. The replacement airport in Sioux Center, Iowa, will open in the fall of 2018 and the existing NPIAS airport (Orange City Municipal Airport) will close.

[9]Proposed new airports anticipated to open after 2023 are not listed in this report. However, needed development for those new airports between 2019 and 2023 is captured in Chapter 4, Table 6.

The new airports anticipated to open by 2023 are shown separately in appendix A and are also included in the State list of airports. They are identified by a location identifier beginning with a plus symbol (e.g., +07W). Appendix A does not identify new airports (planning sites) expected to open beyond 2023. Inclusion of a planning site in the NPIAS does not represent actual approval of the proposed airport (from a planning, environmental, or financial perspective), nor does it mean that the FAA has drawn a final conclusion about the need for (or technical or financial feasibility of) the proposed airport.

Since the last report, three new replacement airports opened in 2016 and 2017: Pilot Station, Alaska; Barter Island, Alaska; and Zuni, New Mexico. The three airports that were replaced have closed.

CONVERSION OF MILITARY AIRFIELDS AND USE OF MILITARY/CIVIL AIRFIELDS

The Defense Base Realignment and Closure (BRAC) Commission has made many military airfields available for conversion to civil aviation use since 1989. Local communities have converted about 32 surplus military airfields to civil use. Most of these military airfields have long runways and associated facilities that can accommodate large civil aircraft. Even before the establishment of the BRAC, military officials have cooperated with local communities across the country to provide civilian access to military airport facilities. These local arrangements add capacity to the national airport system and maximize public investment dollars by eliminating the duplication of airport facilities in a community for military and civilian activities. There are 21 military installations that also allow civilian aircraft activity. Many of the facilities are included in the NPIAS.

The U.S. Department of Defense (DOD) has found it advantageous to operate from civilian airfields. Similar to civilian uses on military airfields, military activity at civilian airfields reduces public investments in airport infrastructure by taking advantage of existing civilian airfield capabilities for military purposes. As specified in the National Guard Bureau Air National Guard Pamphlet 32-1001, Airport Joint Use Agreements for Military Use of Civilian Airfields, at airports where military units conduct a significant level of activity, the DOD entered into an agreement with the local community to pay for costs related to the military use of the airfield. As of 2017, the military has agreements in place with 90 civilian airports.

AIRPORT PRIVATIZATION

Public-use airports in the United States owned and operated by a public agency or a government entity, such as a county, city, or State government, are eligible to participate in the Airport Privatization Pilot Program. Congress established the pilot program (title 49 U.S.C., section 47134) in 1996 to determine if, once certain economic and legal impediments were removed, privatization could produce alternative sources of capital for airport development and provide benefits. The FAA's Modernization and Reform Act of 2012 expanded the pilot program from 5 to 10 airports, but left the requirement that the pilot program can include no more than one large hub airport and at least one general aviation airport unchanged. Public-

owned general aviation airports can be leased or sold; public-owned air carrier airports can only be leased. In February 2013, under the pilot program, the FAA approved a 40-year lease of Luis Muñoz Marin International Airport in San Juan, Puerto Rico, from the Puerto Rico Ports Authority (the public airport sponsor) to Aerostar (a private operator). Currently, Airglades Airport in Clewiston, Florida; Westchester County Airport in White Plains, New York; and St. Louis Lambert International Airport in St. Louis, Missouri, have applications under FAA consideration. Six pilot program slots (including one for a large hub airport) are still available.

Enclosure 14b

U.S. Department of Transportation
Federal Aviation Administration

General Aviation Airports: A National Asset

A fresh look at the many roles General Aviation Airports play in the National Air Transportation System

May 2012

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- Airlines for America
- Aircraft Owners and Pilots Association
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- General Aviation Airport Coalition
- General Aviation Manufacturers Association
- National Association of State Aviation Officials
- National Business Aviation Association
- National Air Transportation Association
- Regional Airline Association
- Alabama Department of Transportation
- Missouri Department of Transportation
- Oklahoma Aeronautics Commission
- Wisconsin Department of Transportation

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Associate Administrator
for Airports

800 Independence Ave, SW.
Washington, DC 20591

Message from the Associate Administrator for Airports

What do general aviation airports mean to you? That's exactly what we ask ourselves when trying to plan and make infrastructure decisions for our general aviation airports. Over the course of more than 100 years of flight, general aviation airports have evolved from simple landing strips to complex aviation centers. Yet, how we categorize them has not kept up.

Did you know that many general aviation airports provide flights to patients in need of critical medical care? Or that local, state, and federal law enforcement agencies use general aviation airports for easier access to our airspace? Or that many of these airports provide flight training which helps keep a steady supply of pilots available for our airlines and military. For policymakers, these different types of activities require different planning and infrastructure spending.

That is why we undertook an extensive 18-month study to examine the roles that general aviation airports play in our national aviation system to ensure we plan and invest wisely.

We applaud the local communities for their continuing support and commitment to aviation. It is important that we work together to ensure our aviation system truly operates as a system. While this report has given us a good foundation and starting point, we recognize that more work needs to be done. We pledge to continue working with our aviation stakeholders and local communities to ensure that our airports remain safe and efficient and meet the needs of the American public.

I invite you to read how we categorized general aviation airports.

Thank you for your interest in our nation's airports!

Christa Fornarotto

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General Aviation Airports: A National Asset

Did you know that tens of thousands of general aviation aircraft, including corporate jets, medical evacuation helicopters, and airplanes owned by individuals for business and personal use are flown in the United States? In fact, three out of every four takeoffs and landings at U.S. airports are conducted by general aviation aircraft, and most of these flights occur at general aviation airports.

SUMMARY

There are over 19,000 airports, heliports, seaplane bases, and other landing facilities in the United States and its territories. Of these, 3,330 are included in the FAA's National Plan of Integrated Airport Systems (NPIAS), are open to the public, and are eligible for Federal funding via the Airport Improvement Program (AIP). When an airport's owners or sponsors accept AIP funds, they must agree to certain obligations (or grant assurances).

Most people are familiar with one or more of the 378 primary airports that support scheduled commercial air service, such as John F. Kennedy International, Chicago O'Hare International, or Los Angeles International, where U.S. and foreign airlines operate. We also rely on the other 2,952 landing facilities (2,903 airports, 10 heliports, and 39 seaplane bases) to support aeromedical flights, aerial fire fighting, law enforcement, disaster relief, and to provide access to remote communities. These 2,952 landing facilities are primarily used by general aviation aircraft and are, therefore, commonly referred to as general aviation airports.[1] Included in this group are 121 airports that also support limited scheduled air service boarding at least 2,500, but less than 10,000 passengers each year.[2]

In cooperation with the greater aviation community, the FAA conducted this groundbreaking 18-month review of these 2,952 landing facilities (for the purpose of this report, these landing facilities including mostly airports, but also some heliports and seaplane bases, are grouped together as general aviation airports).

We documented many important aeronautical functions that are economically and effectively supported at these general aviation airports. As shown in Figure 1, these range from emergency preparedness and response to the direct transportation of people and freight and commercial applications such as agricultural spraying, aerial surveying, and energy exploration.

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[1] The FAA Modernization and Reform Act of 2012 defines a general aviation airport as a public airport that is located in a state and that, as determined by the Secretary of Transportation, does not have scheduled service or has scheduled service with less than 2,500 passenger boardings each year.

[2] Title 49 of the United States Code defines a commercial service airport as a public airport in a state that the Secretary of Transportation determines has at least 2,500 passenger boardings each year and is receiving scheduled passenger aircraft service. A commercial service airport that has more than 10,000 passenger boardings each year is considered a primary airport.

Figure 1: Types of Aeronautical Functions Serving Public Interest

Emergency Preparedness and Response	▪ Aeromedical Flights ▪ Law Enforcement/National Security/Border Security ▪ Emergency Response ▪ Aerial Fire Fighting Support ▪ Emergency Diversionary Airport ▪ Disaster Relief and Search and Rescue ▪ Critical Federal Functions	
Critical Community Access	▪ Remote Population/Island Access ▪ Air Taxi/Charter Services ▪ Essential Scheduled Air Service Cargo	
Other Aviation Specific Functions	▪ Self-Piloted Business Flights ▪ Corporate ▪ Flight Instruction ▪ Personal Flying ▪ Charter Passenger Services ▪ Aircraft/Avionics Manufacturing/Maintenance ▪ Aircraft Storage ▪ Aerospace Engineering/Research	
Commercial, Industrial, and Economic Activities	▪ Agricultural Support ▪ Aerial Surveying and Observation ▪ Low-Orbit Space Launch and Landing ▪ Oil and Mineral Exploration/Survey ▪ Utility/Pipeline Control and Inspection ▪ Business Executive Flight Service ▪ Manufacturing and Distribution ▪ Express Delivery Service ▪ Air Cargo	
Destination and Special Events	▪ Tourism and Access to Special Events ▪ Intermodal Connections (rail/ship) ▪ Special Aeronautical (skydiving/airshows)	

Together these 2,952 general aviation airports form an extensive network and make important economic contributions to society. Many of these aeronautical functions cannot be economically supported at primary commercial service airports and other alternatives (e.g., fighting forest fires without aerial support) are less effective and sometimes more dangerous.

We divided the general aviation airports into four categories based on existing activity[3] measures such as the number and types of based aircraft (i.e., aircraft that are stored at an airport), as well as the volume and types of flights. The four new categories are national, regional, local, and basic as shown in Figure 2. Of the 2,952 general aviation airports studied, 2,455 were grouped into the four new categories. We could not establish a clearly defined category for the remaining 497 airports. They have different types of activity and characteristics and cannot readily be described as a clear group or category. These 497 airports are currently not classified and require further study.

[3] Unless otherwise noted, the categorization was based on 2009 data.

Figure 2: General Aviation Airport Categories

The information summarized in Figures 1 and 2 will help the FAA make better planning decisions. We will ask the state and local airports, heliports, and seaplane base owners to provide updated information on the aeronautical functions supported at each airport and the level and sophistication of flying taking place there. These updates will be part of the normal state system planning process, supported by individual master plan updates and regional or metropolitan system plans.

Future development of general aviation airports included in the NPIAS will continue to be based on eligible and justified needs and priorities, with these new categories providing a more consistent framework within which to evaluate proposed projects. Future NPIAS reports, starting with the FY 2013-2017 report to be issued later this year, will incorporate the new categories developed in this report.

The report also raised some important investment and regulatory questions that require further investigation, including:

- Whether current or amended part 139 regulations (i.e., the FAA airport operating certificates) should be extended to the higher-activity general aviation airports;
- How facility requirements should vary among airports in the new general aviation categories
- How AIP funds can be used most effectively; and
- Whether all general aviation airports be held to the same grant assurances as other airports

The remainder of this report provides background on the aeronautical functions that are supported at these airports and information on each of the four new categories. The report concludes with a summary of the key findings of the report and next steps to be undertaken. Complete details on how the categories were created and a listing of airports, heliports, and seaplane bases within each category can be found in Appendices A and B.

Did you know that general aviation contributed $38.8 billion in economic output in 2009? Factoring in manufacturing and visitor expenditures, general aviation accounted for an economic contribution of $76.5 billion.

INTRODUCTION

General aviation airports in the United States are diverse and their aeronautical functions have evolved over time. Many airports, for instance, were opened as private landing strips or military airfields in the 1920s, 1930s, and 1940s.

Some evolved into primary airports we use today; one of these is Salt Lake City International (SLC). SLC began as a simple landing strip in 1911, became an air-mail airport known as Woodward Field in 1920, and ultimately was developed into the large hub primary airport it is today.

Other airports, such as Gauthier's Flying Field just north of the heart of Chicago, evolved from a modest grass strip in the 1920s into a thriving general aviation airport with hundreds of based aircraft and some 90,000 takeoffs and landings annually. That airport is:

- now named Chicago Executive Airport,
- serves the general and business aviation sectors of the Chicago Metropolitan Area, and
- accepts traffic that would otherwise be destined for Chicago O'Hare International Airport.

Still other airports, heliports, and seaplane bases were established and continue to operate as small general aviation airports accessing remote community areas, and some large military airfields have been converted to general aviation use.

General aviation airports have evolved differently over the past century to meet the specific needs of the communities they serve and the national aviation system. As a result, the United States has the largest and most diverse system of general aviation airports in the world.

It has been 40 years since the roles of these airports have been thoroughly reviewed. Over this period of time, there have been dramatic changes in the economy, where people live, and how they use general aviation airports, heliports, and seaplane bases. It continues to be important to examine the roles that these airports play in our system to ensure that our policies effectively support the public interest.

GENERAL AVIATION SERVES IMPORTANT SOCIETAL NEEDS

Transportation systems (including air, rail, highways, and waterways) connect communities, businesses, people, and provide critical support functions. The national system of airports, heliports, and seaplane bases was developed to provide communities with access to a safe and adequate public system of general aviation airports.

Our nation's general aviation airports focus mainly on more specialized services that scheduled airline service cannot provide. In 2009, nonairline operators at these general aviation airports

spent over $12 billion, flying an estimated 27 million flights for emergency medical services, aerial fire fighting, law enforcement and border control, agricultural functions, flight training, time-sensitive air cargo services, business travel, and scheduled services. Some general aviation airports provide all of these aeronautical functions, while others provide only a few. Some airports are large and have multiple runways and extensive facilities, while others are relatively small and may need only a short, single runway, helipad, or sea lane to serve a critical function.

Federal, State, and local governments, as well as aviation users, have invested in a balanced, safe, and efficient system of general aviation airports since the beginning of the 20th century. System is the key concept. Having just a few general aviation airports would not accomplish much.

These airports, heliports, and seaplane bases were included in the NPIAS because they were deemed important to the Federal system and are open to the public. They provide connections to the larger aviation system while providing access to their respective communities. Having a well-developed system of general aviation airports throughout the country supports commerce while also providing a safety net of airports to support emergency aircraft diversions when necessary due to mechanical problems, medical emergencies, deteriorating weather conditions or other unforeseen circumstances. The rationale for continued Federal involvement in the system is that these general aviation airports assist communities and their residents in meeting the needs that would otherwise be too costly or impossible to provide.

A list of five categories of aeronautical functions served by general aviation airports was provided in Figure 1. The following are examples that illustrate the societal benefits of general aviation airports, heliports, and seaplane bases.

AERONAUTICAL FUNCTIONS SERVING THE PUBLIC INTEREST

Emergency Preparedness and Response Functions

Photo courtesy of americanjets.net

Aeromedical Flights: Many general aviation airports are used to providing flights that transport patients in need of specialized medical care. It is faster, easier on the patient, and far less expensive to operate these lifesaving services from a general aviation airport. Figure 3 shows the general aviation airports in the country where air ambulance services were flown in 2009. For example, a medical center serving western Massachusetts relies on Westover Metropolitan Airport to transport patients who cannot endure the stress and duration of ground transportation or commercial flights.

Law Enforcement/National Security/Border Security: General aviation airports often serve as the base for local, state, or national programs to enforce laws. For instance, many local police forces in large metropolitan areas (for example, the city of Los Angeles) choose to use a general aviation airport to base their helicopter fleets. It is usually less expensive for them to operate from a general aviation airport than from a primary airport where there is more commercial activity and the smaller airport is usually more accessible as well.

Figure 3: General Aviation Airports Serving Aeromedical Flights[4]

Emergency Diversionary Airport: An extensive system of airports provides pilots with immediate alternatives to their intended destination in the event of unexpected bad weather or a flight emergency. The system of airports is a safety net that reduces accidents by being extensive and available. Just one of many examples demonstrating this safety net is a recent Archie League Award[5] given to an air traffic controller for assisting a pilot whose engine had stopped while flying between two general aviation airports - Pittsfield Municipal Airport in Massachusetts to Caledonia County Airport in Vermont. The controller was able to quickly divert the pilot to the nearby general aviation airport in Concord, New Hampshire. The pilot was able to make a successful landing after regaining partial power.

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[4] Metropolitan or Micropolitan Statistical Areas are geographic entities defined by the Office of Management and Budget for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics.
[5] Annual Archie League Medal of Safety Awards, National Air Traffic Controllers Association.

Disaster Relief and Search and Rescue: The extensive system of general aviation airports provides a staging area to support relief efforts wherever they are needed. For example, Joplin Regional Airport in Joplin, Missouri, played a vital role in recovery efforts after a major tornado ripped through the region in May 2011. General aviation airports like Eastern Sierra Regional Airport, located near California's national forests, are used as staging areas for the all-volunteer Civil Air Patrol, whose members are often called upon to locate and facilitate the rescue of missing persons or others in need. The savings in resources, time, and human life attributable to these efforts are an important contribution to our society.

Critical Community Services Supported by Government Agencies: Over 390 general aviation airports are designated by the Federal Government to provide critical services, including access for U.S. Customs and Border Protection, the U.S. Marshals Service, the U.S. Post Office, the U.S. Forest Service, and disaster relief. For example, forest fires during the summer months are common events, especially in western states. The U.S. Forest Service designates certain general aviation airports as staging areas to fight the fires. Using aircraft to fight large fires spread over a wide geographic area is often the most cost-effective solution, reduces human exposure to hazards on the ground, and gets the fire out more quickly, which saves property and lives. Figure 4 shows the locations of these critical community services supported by government agencies at general aviation airports throughout the United States (color coded by services).

Photo courtesy of U.S. Customs and Border Protection

Photo courtesy of firedex.com

Figure 4: Airports With Critical Community Services Provided by Government Agencies

Critical Community Access Functions

Remote General Aviation Airports: In some parts of the country, general aviation airports provide the only means of transportation. Without these airports, residents would be faced with isolation or would have to incur substantial time, money, and risk traveling by other means. Remote airports contribute to the national economy by reducing the resources needed to connect these communities to the national economy.

Photo courtesy of flysigns.com

Air Taxi Operations: When scheduled air service either is not available or inconvenient, businesses and individuals charter aircraft from air taxis operating at general aviation airports. These flights save time and make it possible to fly directly to places that cannot be reached by scheduled service.

Other Aviation Specific Functions

Self-Piloted Business Flights: About 11 percent of the total private flying in the United States is done by business persons flying themselves to meetings or other events. Most of this flying is done with piston or turboprop aircraft. Most of the pilots own or work for relatively small businesses and use the aircraft to accomplish missions that would otherwise take more time or would be infeasible.

Corporate Flights: About 12 percent of the total private flying in the United States is done in aircraft owned by a business and piloted by a professional. The majority of these flights are in jets and cover long distances, with some flying to intercontinental and international destinations. Businesses elect to fly these trips to save time and expand their geographic and organizational span of control. Figure 5 shows long distance and international flights from Van Nuys Airport near Los Angeles. The map shows the destinations of nonstop flights and illustrates the global access provided to operators of sophisticated aircraft at general aviation airports.

Figure 5: Long Distance and International Flights From Van Nuys, California

Photo courtesy of flysigns.com

Flight Instruction: Virtually all of the private flight instruction in the United States takes place at general aviation or private use airports. Many future airline pilots get their first training at these airports. For instance, Le Mars Municipal Airport is a base for a Young Eagles Program that provides opportunities for youngsters to learn about and experience flying.

Personal Flying: About a third of all private flying in the United States is for personal reasons, which may include practicing flight skills, personal or family travel, personal enjoyment, or personal business.

Commercial, Industrial, and Economic Activity Functions

Photo courtesy of Aero Crop Services, Inc.

Photo used with permission of James Richard, chief pilot, dynamicaviationhelicopters.com

Agricultural: From 1929 to the present, U.S. agricultural output has become so much more efficient that the average American family now spends dramatically less of its income on food (11 percent today versus 23 percent in 1929). Aerial application of fertilizer, fungicides, and pesticides has played an important role in this increased productivity, especially when it is critical to apply material quickly over a large geographic area. Any substitute technology is more costly and much slower than aerial application. An example is Le Mars Municipal Airport, which provides an efficient platform for the aerial application of fungicide and insecticide for area farms.

Aerial Surveying and Observation: Companies that have built infrastructure over large geographic areas need a fast and accurate way to plan, manage, and maintain it. Energy companies own and operate thousands of miles of pipeline and the fastest and most thorough way to inspect them is to fly aircraft with specialized equipment that document conditions on the ground. Gas and electric utilities use aircraft for the same reasons. Municipalities fly aerial observation flights to document tax maps and plan infrastructure.

Destination and Special Functions

Tourism and Access to Special Events: General aviation airports often enable access to areas otherwise inaccessible for recreation, including remote parks, mountainous areas, and islands. In addition, during special events (e.g., the Super Bowl, college championship playoffs or bowl games, major concerts, NASCAR races, etc.), general aviation airports are used by both charter carriers and private operators to supplement facilities and services at primary airports.

NEW CATEGORIES WILL HELP GUIDE POLICY MAKERS

Our nation's general aviation airports, heliports, and seaplane bases fulfill a broad range of aeronautical functions, as shown in the previous examples. However, it is difficult to properly convey needs of these facilities, particularly airports, with a single term.

Over time, two statutory definitions have emerged to classify general aviation airports: those that also support limited commercial service and those that help relieve congestion at primary airports. However, these definitions do not adequately describe the roles of these general aviation airports and the benefits of a large and diverse system.

For instance, some general aviation airports have significantly more operations than do some primary commercial service airports and some general aviation airports relieve congested primary airports. However, most airports currently designated as relievers are not primarily engaged in relieving congestion at another airport, but instead support other critical aeronautical functions.

In the summer of 2010, the FAA assembled a national team to review activity at general aviation airports and the aeronautical functions they provide in order to better describe their current role in the national airport system. Throughout the process, the FAA worked closely with aviation agencies and major industry associations to gather and incorporate information about these airports.

An important objective was to develop a new way to categorize general aviation airports, heliports, and seaplane bases using activity and other data in existing Federal databases. Furthermore, the analysis had to be repeatable every few years. Analysis based on other local, statewide, or site specific data will continue to be assessed as part of statewide system planning, metropolitan system planning, and master planning for individual airports.

The data reviewed in this study revealed that most airport information, such as runway length, the presence of a control tower, the availability of fuel, and other characteristics, varied so much across the 2,952 general aviation airports that it was not possible to group them. For instance, the length of runway is very important to the type and size of aircraft using a specific airport, but it does not mean that there is a common minimum length required to meet a specific aeronautical function or combination of functions. Moreover, other factors (such as variability of wind direction, climate, altitude, and surrounding terrain) often determine runway length.

A similar conclusion was reached regarding control towers. A control tower is not necessarily needed for an airport to serve a specific aeronautical function. Some airports can be used for a number of different functions and by different types of aircraft even though it may have a short runway, no control tower, and no fuel services available.

Examples of the data that were useful in categorizing general aviation airports include the number of based jets, number of all based aircraft (including helicopters and seaplanes), number of instrument operations, international flights, interstate flights, and flights over 500 miles. A full description of these criteria is provided in Appendix A.

NEW GENERAL AVIATION AIRPORT CATEGORIES

This study focuses on the Federal network of general aviation airports, heliports, and seaplane bases and divides them into four new categories based on existing activity levels and related criteria: national, regional, local, and basic. Airports may move from one category to another over time as aviation activity levels change. The following pages describe these categories and provide examples in each category.

National (84)	Regional (467)	Local (1,236)	Basic (668)
Supports the national and state system by providing communities with access to national and international markets in multiple states and throughout the United States.	Supports regional economies by connecting communities to statewide and interstate markets.	Supplements local communities by providing access primarily to intrastate and some interstate markets.	Supports general aviation activities such as emergency service, charter or critical passenger service, cargo operations, flight training, and personal flying.

Map of the General Aviation Airports in the Four Categories

Examples of General Aviation Airports in the Four New Categories

National Airports

Teterboro Airport
Teterboro, New Jersey

Regional Airports

Watsonville Municipal Airport
Watsonville, California

Local Airports

Thomaston-Upson County Airport
Thomaston, Georgia

Basic Airports

Tangier Island Airport
Tangier, Virginia

National airports (84) are located in metropolitan areas near major business centers and support flying throughout the nation and the world. National airports are currently located within 31 states. They account for 13 percent of total flying at the studied general aviation airports and 35 percent of all flights that filed flight plans at the airports in the four new categories. These 84 airports support operations by the most sophisticated aircraft in the general aviation fleet. Many flights are by jet aircraft, including corporate and fractional ownership operations and air taxi services. These airports also provide pilots with an alternative to busy primary commercial service airports. There are no heliports or seaplane bases in this category.

Criteria Used to Define the New National Category (all numbers are annualized)
1) 5,000+ instrument operations, 11+ based jets, 20+ international flights, or 500+ interstate departures; or 2) 10,000+ enplanements and at least 1 charter enplanement by a large certificated air carrier; or 3) 500+ million pounds of landed cargo weight.

Map of 84 National Airports
(There are currently no national airports in Alaska or Hawaii)

Findings at National Airports:

- A typical national airport has nonstop departures to foreign points, including flights to Asia, Europe, Central and South America.
- All 84 airports supported air ambulance services in 2009.
- 66 are designated as reliever airports.
- None have scheduled commercial service, but 48 were used by large certificated air carriers for charter flights.
- 45 provided important access to law enforcement, the U.S. Postal Service, U.S. Customs and Border Protection, or U.S. Forest Service.
- On average, these airports have over 200 based aircraft and over 30 based jets.
- Operators spend over $50 million per year flying at the average national airport.
- $1.2 billion of AIP funds was invested at national airports during the period 2001-2009. Recognizing that not all airports received AIP funds every year and that simple averages can present a skewed impression, the $1.2 billion represents a simple annual average of $1,610,297 per airport, including $89,734 in nonprimary entitlement (NPE) funds and $1,520,563 in discretionary funds. Naturally, the size and nature of capital investments varied greatly among airports within the category.

Profile: National Airport Serving National and Global Markets

Van Nuys Airport (VNY) is a public airport located in Van Nuys in the San Fernando Valley section within the city limits of Los Angeles, California. VNY is the second busiest general aviation airport in the world and one of the busiest airports (in terms of takeoffs and landings) in the world. With just two parallel runways, VNY handled over 350,000 aircraft movements in 2010, averaging about 1,000 operations per day. By comparison, Los Angeles International Airport (LAX) (with four runways and exceptional amounts of commercial traffic) has roughly 1,500 operations per day.

General Aviation Turbine Flying From VNY (2009)

As of 2010, there were over 660 aircraft based at VNY, with nearly 200 being turbojets.

Many of the helicopters in the Los Angeles basin are also based at VNY.

The sophisticated aircraft fly interstate and overseas missions in support of major industries, including many notables from entertainment and finance. Another indicator of the role of VNY is the heavy use of instrument flight rules (IFR), despite the fact that it is located in sunny southern California. VNY accounted for the third most IFR flights among all general aviation airports in the nation in 2010 with destinations throughout the nation and the world.

In 2009, aviators spent about $190 million on flights from VNY. The table shows that while general aviation piston operators flew the most flights at VNY, four other user groups dominated the spending on aviation activity at the airport: turbine, rotor, air ambulance, and passenger charters accounted for 85 percent of total spending. The prominence of these activities shows that VNY supports services not easily replicated at LAX.

Van Nuys Airport	Shares - FY 2009	
User Groups	Aircraft Operating Costs	Flights
Fractional Ownership Programs	4%	2%
Nonscheduled Part 135 Passenger	14%	14%
General Aviation – Turbine	26%	10%
General Aviation – Piston	10%	46%
General Aviation – Rotor	25%	20%
Air Ambulance	20%	8%
Total	99%	100%
Unclassified	1%	0%

Regional airports (467) are located in metropolitan areas and serve relatively large populations. These 467 airports support interstate and some long distance (cross country) flying with more sophisticated aircraft. Forty-nine states currently have regional airports with the exception of Hawaii. They account for 37 percent of total flying at the studied general aviation airports and 42 percent of flying with flight plans. There is a substantial amount of charter (air taxi), jet flying, and rotorcraft flights at regional airports. There are no heliports or seaplane bases in this category.

Criteria Used to Define the New Regional Category (all numbers are annualized)
1) Metropolitan Statistical Area (MSA) (Metro or Micro) and 10+ domestic flights over 500 miles, 1,000+ instrument operations, 1+ based jet, or 100+ based aircraft; or 2) The airport is located in a metropolitan or micropolitan statistical area, and the airport meets the definition of commercial service.

Map of 467 Regional Airports
(There are no regional airports in Hawaii)

Findings at Regional Airports:

- 459 regional airports supported air ambulance services in 2009.
- 108 regional airports provided important access to law enforcement, the U.S. Postal Service, U.S. Customs and Border Protection, U.S. Forest Service, or Essential Air Service.
- 51 have limited scheduled air service that boarded more than 2,500, but less than 10,000, passengers in 2010.
- 137 are designated as reliever airports.
- 90 were used by large certificated air carriers for charter flights.
- 56 received scheduled air service through the Essential Air Service Program.
- On average, these airports have more than 90 based aircraft with a few jets.
- Operators spend over $10 million per year flying at the average regional airport.
- $2.4 billion of AIP funds was invested at regional airports during the period 2001-2009. Recognizing that not all airports received AIP funds every year and that simple averages can present a skewed impression, the $2.4 billion represents a simple annual average of $575,016 per airport, including $90,520 in NPE funds and $484,497 in discretionary funds. Naturally, the size and nature of capital investments varied greatly among airports within the category.

Profile: Regional Airport Serving Regional and National Markets

Ankeny Regional Airport (IKV) is a public airport located 1 mile southeast of the central business district of Ankeny, a city in Polk County, Iowa. The airport has two runways and handled over 48,000 aircraft operations during the 12-month period ending September 30, 2010, averaging 133 operations per day. As of February 2011, there were 80 based aircraft at IKV, with 77 fixed wing aircraft and 3 helicopters. The majority of the fixed wing based aircraft are single engine.

The airport supports commercial and general aviation services for the Des Moines metropolitan area that would be difficult to support at a primary airport including: air charter services, flight instruction, air photography, aircraft refueling, tie down, and hangar/garage rental. IKV also hosts events every year, including Fly-Ins and Air Expos

Many businesses and organizations use the airport and its facilities, including first responders such as the Iowa State Patrol, Iowa Army National Guard, and Civil Air Patrol.

The map shows regional airline freight destinations flown IFR from IKV in FY 2009.

The table shows that general aviation activity comprised 88 percent of the flights during FY 2009 and 66 percent of the aircraft operating costs. After general aviation operations, the next highest share of flights was from air ambulance operations and the regional airline freight operations.

Ankeny Regional Airport	Shares - FY 2009	
User Groups	Aircraft Operating Costs	Flights
Regional Airline Freight	21%	1%
Nonscheduled Part 135 Passenger	5%	2%
Part 135 Passenger – Piston	2%	4%
General Aviation – Turbine	33%	14%
General Aviation – Piston	31%	73%
General Aviation – Rotor	2%	1%
Government/Military	3%	1%
Air Ambulance	3%	3%
Total	100%	100%

Local airports (1,236) are the backbone of our general aviation system with at least one local airport in virtually every state. They are typically located near larger population centers, but not necessarily in metropolitan or micropolitan areas. Local airports account for 42 percent of the general aviation airports eligible for Federal funding. They also account for approximately 38 percent of the total flying at the studied general aviation airports and 17 percent of flying with flight plans. Most of the flying is by piston aircraft in support of business and personal needs. In addition, these airports also typically accommodate flight training, emergency services, and charter passenger service. The flying tends to be within a state or immediate region. There are no heliports, but there are four seaplane bases in this category.

Criteria Used to Define the New Local Category (all numbers are annualized)
1) 10+ instrument operations and 15+ based aircraft; or 2) 2,500+ passenger enplanements.

Map of 1,236 Local Airports
(There are no local airports in Hawaii)

Findings at Local Airports:

- 980 local airports supported air ambulance services in 2009.
- 121 local airports provided important access to law enforcement, the U.S. Postal Service, U.S. Customs and Border Protection, U.S. Forest Service, or Essential Air Service.
- 70 have scheduled air service that boarded more than 2,500, but less than 10,000, passengers in 2010 with 68 in Alaska.
- 42 are designated as reliever airports.
- 30 were used by large certificated air carriers for charter flights.
- 27 received scheduled air service through the Essential Air Service Program.
- On average, these airports have 37 based aircraft.
- Operators spend over $2.2 million per year flying on average at each of these airports.
- $2.6 billion of AIP funds was invested at the local airports during the period 2001-2009. Recognizing that not all airports received AIP funds every year and that simple averages can present a skewed impression, the $2.6 billion represents a simple annual average of $230,203 per airport, including $78,654 in NPE funds and $151,549 in discretionary funds. Naturally, the size and nature of capital investments varied greatly among airports within the category.

Profile: Local Airport Serving Local and Regional Markets

Eastern Sierra Regional Airport (BIH) is a public airport located about 2 miles east of the central business district of Bishop in Inyo County, California. The airport has three runways, two helipads, and handles about 26,000 operations annually, averaging 71 operations per day. The majority of operations consist of local and itinerant general aviation flights with some military operations. The airport has 54 based aircraft, most of which are single engine.

BIH provides a number of important services. It provides search and rescue services for those who visit nearby national parks, and represents an essential connection for a relatively isolated community. An air ambulance company operates from BIH and services the local hospital. The airport is also used as a forest service tanker base to respond to wildfires in the area, has contracts with the military as a refueling location, and refuels military helicopters on a regular basis.

The Civil Air Patrol uses BIH to provide a variety of emergency services, and the California State Patrol and the U.S. Drug Enforcement Administration use the airport as a base of operations. The Los Angeles Department of Water and Power, Southern California Edison, and assorted private contractors have helicopters based at BIH that perform aqueduct inspection and security, as well as power line maintenance. BIH is also designated as an area disaster emergency equipment staging area.

The map shows air ambulance destinations flown IFR from BIH in FY 2009. Most of these flights go to destinations in California with some to adjacent states.

As can be seen in the table, general aviation operations comprised 89 percent of the flights in FY 2009 and 73 percent of the aircraft operating costs, with general aviation turbine, general aviation piston and air ambulance aircraft playing prominent roles.

Eastern Sierra Regional Airport	Shares - FY 2009	
User Groups	Aircraft Operating Costs	Flights
Nonscheduled Part 135 Passenger	7%	7%
General Aviation – Turbine	41%	16%
General Aviation – Piston	32%	73%
Government/Military	2%	0%
Air Ambulance	16%	3%
Other	2%	1%
Total	100%	100%

Basic airports (668) are often able to fulfill their role with a single runway, helipads, seaplane, and limited infrastructure. Forty-three states have basic airports. These 668 airports fulfill the role of a community airport providing a means for private general aviation flying and linking the community to the national airport system. Basic airports account for approximately 7 percent of the total flying at general aviation airports and 2 percent of flying with flight plans. Most of the flying is self-piloted for business and personal reasons using propeller-driven aircraft. A fair amount of air charter (taxi) services is provided at these airports. There are 3 heliports and 20 seaplane bases in this category.

Criteria Used to Define the New Basic Category (all numbers are annualized)
1) 10+ based aircraft; or 2) 4+ based helicopters, or 3) The airport is located 30+ miles from the nearest NPIAS airport; or 4) The airport is identified and used by the U.S. Forest Service, or U.S. Marshals, or U.S. Customs and Border Protection (designated, international, or landing rights), or U.S. Postal Service (air stops), or has Essential Air Service; or 5) The airport is a new or replacement facility activated after January 1, 2001; and 6) Publicly owned or privately owned and designated as a reliever with a minimum of 90 based aircraft.

Map of 668 Basic Airports

Findings at Basic Airports:

- 269 basic airports supported air ambulance services in 2009.
- 107 basic airports provided access to remotely located populations.
- 119 provided important access to law enforcement, the U.S. Postal Service, U.S. Customs and Border Protection, U.S. Forest Services, or Essential Air Service.
- Only one is designated as reliever airport.
- 19 were used by large certificated air carriers for charter flights.
- 29 received scheduled air service through the Essential Air Service program.
- On average, these airports have 10 based aircraft.
- Aircraft operators spend about $540,000 per year flying on average at each of these airports.
- $1.1 billion of AIP funds was invested at basic airports during the period 2001-2009. Recognizing that not all airports received AIP funds every year and that simple averages can present a skewed impression, the $1.1 billion represents a simple annual average of $182,384 per airport, including $68,039 in NPE funds and $114,345 in discretionary funds. Naturally, the size and nature of capital investments varied greatly among airports within the category.

Profile: Basic Airport Serving Local and Regional Markets

Taylor County Airport (MDZ) is a public airport located about 3 miles southeast of the central business district of Medford, a city in Taylor County, Wisconsin. The airport has two runways and handles about 7,000 flights annually, averaging about 19 per day. There are 13 aircraft based at MDZ made up of 12 single engine aircraft and 1 jet.

With no commercial airline service at MDZ, general aviation traffic dominates activity.

MDZ is an efficient producer of self-piloted flying linking the community to the regional economy. The map shows general aviation piston flying IFR from MDZ in FY 2009. Many of the destinations are either within the state or in adjacent states with some flights going as far as North Carolina and Texas.

General Aviation Piston Flying from MDZ

The table shows that general aviation piston activity accounted for 94 percent of flights in FY 2009 and 76 percent of aircraft operating costs. Part 135 air taxi/piston activity comprised 4 percent of flights and general aviation turbine and nonscheduled part 135 activity each made up 1 percent of flights. General aviation turbine activity made up 16 percent of aircraft operating costs while part 135 piston and nonscheduled part 135 each comprised 4 percent.

Taylor County Airport	Shares - FY 2009	
User Groups	Aircraft Operating Costs	Flights
Nonscheduled Part 135 Passenger	4%	1%
Part 135 Passenger – Piston	4%	4%
General Aviation – Turbine	16%	1%
General Aviation – Piston	76%	94%
Total	100%	100%

GENERAL AVIATION AIRPORTS NOT CLASSIFIED

There are 497 airports (including 475 airports, 7 heliports, and 15 seaplane bases) that did not fit into one of the four new categories. Most of these airports have been in the NPIAS for decades and may have seen an erosion of based aircraft and activity (because of population and economic shifts or recession) or may have no based aircraft. Twenty-two of these airports are privately owned and were originally included in the national system as relievers for commercial service airports, but no longer meet the entry criteria. Others may be seasonal airports, military airfields recently converted to general aviation use, or airports used to access important state airports with related national interests.

We found that these airports account for approximately 6 percent of total flying at the studied general aviation airports and 2 percent of flying with flight plans; none are commercial service airports, and none received scheduled air service through the Essential Air Service program.

$371 million of AIP funds was invested at these 497 airports during the period 2001-2009. Recognizing that not all airports received AIP funds every year, and that simple averages can present a skewed impression, the $371 million represents a simple annual average of $82,889 per airport, including $48,757 in NPE funds and $34,132 in discretionary funds. Naturally, the size and nature of capital investments varied greatly among airports within the category.

The FAA will continue to work with the aviation community to assess and potentially classify these airports, heliports, and seaplane bases.

Map of General Aviation Airports Not Classified

KEY FINDINGS

During this project, we learned about the relationship between activity and existing infrastructure, and the diverse and critical functions that general aviation airports provide. We reviewed and revalidated the guiding principles of the National System contained in the NPIAS. The FAA updated the principles listed below in 2012, and these will continue to help guide the future development of our nation's general aviation airports.

Guiding Principles of the National Airport System (updated 2012)

Airports should be:

- Safe, efficient, located where people will use them, and developed and maintained to appropriate standards.
- Affordable to both users and Government, relying primarily on producing self-sustaining revenue and placing minimal burden on the general revenues of the local, state, and Federal Governments.
- Flexible, expandable, able to meet increased demand, and to accommodate new aircraft types.
- Permanent with assurance that they will remain open for aeronautical use over the long term.
- Compatible with surrounding communities, maintaining a balance between the needs of aviation, the environment, and the requirements of residents.
- Developed in concert with improvements to the air traffic control system and technological advancements.

These guiding principles also state that the National Airport System:

- Is critical to the national transportation system. Airports provide a variety of important public services and connect their communities to the transportation network. The national transportation system is essentially a government (Federal, state, local) function that needs to be developed and maintained.
- Should support a variety of critical national objectives (such as defense, emergency readiness, law enforcement, and postal delivery).
- Should be extensive, providing as many people as possible with convenient access to air transportation, typically by having most of the population within 20 miles of a NPIAS (national system) airport.

This top-down report confirmed that the United States has a diverse network of general aviation airports that serve the public interest. Federal investment in these airports allows many aeronautical functions to be accomplished more efficiently. We also concluded that:

- General aviation airports have developed over time based on state and local aeronautical and societal needs rather than from a set of national directives.
- 2,455 (83 percent) of the 2,952 general aviation airports could be readily grouped into four distinct categories (national, regional, local, and basic) based on the number and types of aircraft using each airport and the level and types of activity.

- Many of the airports designated as relievers serve their own economic and operational role and do not primarily relieve congestion at another airport.
- With possibly a few exceptions, the based aircraft, passenger enplanement, and instrument flight data provided an accurate means to categorize the general aviation airports. Improved reporting of based aircraft and total aircraft operations at each airport may change the categorization of only a small number. Unfortunately, some airports have declined to participate in the National Based Aircraft Inventory Program (Airport Master Record, FAA Form 5010-1) and only 9 percent of the 2,952 airports studied have control towers reporting activity.
- Most of the Federal funds invested at the 2,952 general aviation airports (about 75 percent from 2002-2009) were used for airfield improvements such as runways, taxiways, and aprons.
- General aviation users spend more to fly at the general aviation airports than the Federal Government invested at these airports. For example, in 2009, nonairline operators spent $12 billion flying an estimated 27 million flights at the 2,952 general aviation airports, while the Federal Government invested about $1.1 billion to help state and local governments maintain and improve these airports.

As we reviewed the national airport system data, some interesting issues, ranging from safety design standards to future investment considerations, were identified. Addressing some of these questions would require statutory or regulatory changes that will have to be fully vetted and coordinated by the appropriate organizations. For example:

- Does it make sense to continue to use the existing nomenclature of general aviation, reliever, and commercial service airports contained in current statutes or would it be clearer to only use the new ASSET categories developed?
- Should all general aviation airports be held to the same AIP grant assurances?
- Should there be different airport requirements for each of the general aviation airport categories?
- Should noncertificated national and regional airports with operations by heavy general aviation aircraft be required to obtain airport certification equivalent to the requirements under part 139?[6] Should part 139 regulations be amended to include airports with these types of operations?

[6] Title 14 Code of Federal Regulations (CFR), part 139, provides a process for the FAA to issue airport operating certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats or serve scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats.

NEXT STEPS

The new general aviation categories will provide a baseline from which to measure changes in operations and needs. State and local governments will be encouraged to use the new categories to help guide future system and airport planning decisions. Those general aviation airports that meet the statutory definitions of commercial service and reliever will continue to be so classified within the four new categories. The FAA will periodically review and adjust the general aviation airports included in the NPIAS based on changing activity levels.

The FAA will continue to identify general aviation airports that are important to the national transportation system through the formulation of the NPIAS. We will do this in concert with state aviation agencies, airport sponsors and local planning organizations. Future reports to Congress, starting with the 2013-2017 NPIAS report, will incorporate the new general aviation airport categories developed in this report. The FAA will:

1. Incorporate these categories into the process for identifying the national airport system's 5-year development and funding needs;
2. Work with airports and state agencies to assess the 497 general aviation airports not classified that could not be placed into one of the four new categories;
3. Update the existing FAA guidance to reflect these new categories;
4. Reevaluate the general aviation airports biennially, in conjunction with the FAA's report to Congress to capture changing conditions, needs, and roles;
5. Review policies related to providing Federal money to privately owned airports included in the NPIAS, the role they play in the national transportation system, and the types of protections necessary to safeguard public investment in these airports over the long term; and
6. Continue to work with aviation stakeholders to address investment and regulatory questions concerning part 139 certification, grant assurances, airport requirements, funding eligibility, and entitlement programs, and revenue use and diversion.

In addition, as required by the FAA Modernization and Reform Act of 2012[7], the FAA will evaluate the formulation of the NPIAS and provide Congress with a report on the findings. Specifically, the FAA will within the next 36 months:

1. Evaluate the criteria used for including airports in the NPIAS and the application of such criteria in the most recently published version of the NPIAS;
2. Evaluate the changes in airport capital needs as shown in the 2005–2009 and 2007–2011 NPIAS, compared with the amounts apportioned or otherwise made available to individual airports between 2005 and 2010;
3. Compare the amounts received by airports under the AIP in airport apportionments, state apportionments, and discretionary grants during such fiscal years with capital needs as reported in the NPIAS;
4. Evaluate the effect of transfers of airport apportionments; and
5. Analyze the apportionment of funds to primary airports.

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[7] The FAA Modernization and Reform Act of 2012 (section 155), under section 47103 of title 49 United States Code.

6. Document and review the methods used by airports to reach the 10,000 passenger enplanement threshold.

This report is due to Congress by the spring of 2015, and it will include recommendations for changes to policies and methods of determining apportionment amounts to individual airports.

GLOSSARY

Airport Improvement Program (AIP) provides grants to public agencies and, in some cases, to private owners and entities for the planning and development of public-use airports that are included in the NPIAS.

ASSET general aviation airports (2,952 airports) are airports that are included in the NPIAS and are not primary airports. They include commercial service (121), general aviation (2,563), and reliever (268) airports. (These airports were studied in the ASSET Report.)

Based aircraft are aircraft that are "operational and airworthy," which are based at an airport for a majority of the year. This is the definition used by airports when reporting based aircraft on the website www.basedaircraft.com, National Based Aircraft Inventory Program (Airport Master Record, FAA Form 5010-1).

Essential Air Service Program was put into place by the Airline Deregulation Act of 1978 to guarantee that small communities that were served by certificated air carriers before deregulation maintain a minimal level of scheduled air service. The U.S. Department of Transportation currently subsidizes commuter airlines to serve approximately 140 rural communities across the country that otherwise would not receive any scheduled air service.

Fixed base operator is a commercial business granted the right by the airport sponsor to operate on an airport and provide aeronautical services such as fueling, hangaring, tie-down and parking, aircraft rental, aircraft maintenance, flight instruction, etc.

General aviation is the operation of civilian aircraft for purposes other than commercial passenger or freight transport, including personal, business and instructional flying.

General aviation airports are those not classified as commercial service airports.

Nonprimary commercial service airports (121 airports) are airports with scheduled air carrier service and annual passenger boardings between 2,500 and 10,000.

Instrument operations or instrument flight rules (IFR) refer to: (1) a flight that depends upon flying by reference to instruments in the flight deck and navigation is accomplished by reference to electronic signals; or (2) a type of flight plan an aircraft is flying, such as an IFR or visual flight rules flight plan. Most IFR flights involve active control by FAA air traffic controllers.

Large certificated air carrier is an air carrier holding a certificate that: (1) operates aircraft designed to have a maximum passenger capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds; or (2) conducts operations where one or both terminals of a flight stage are outside the 50 states of the United States, the District of Columbia, the Commonwealth of Puerto Rico, or the U.S. Virgin Islands.

Metropolitan and Micropolitan Statistical Areas (MSA) (metro and micro areas) are geographic entities defined by the Office of Management and Budget for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. The term "Core Based Statistical Area" is a collective term for both metro and micro areas. A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

National Plan of Integrated Airport Systems (NPIAS) identifies nearly 3,300 existing and proposed airports that are significant to national air transportation and thus eligible to receive Federal grants under the AIP.

Nonprimary entitlements (NPE) is AIP entitlement funding made available for the use at nonprimary commercial service, general aviation, and reliever airports. These airports are referred to as "nonprimary" airports.

Official Airline Guide is a database and publication of worldwide airline schedules.

Part 135 operators are commercial, generally nonscheduled or air taxi operators that use smaller aircraft (title 14 CFR, part 135).

Part 139 establishes a process for the FAA to issue airport operating certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats or airports that serve scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats.

Primary airports (378 airports) are publically owned airports with scheduled air carrier service and more than 10,000 passenger boardings each year.

Reliever airports (268 airports) are general aviation airports in metropolitan areas that provide pilots with alternatives to using congested commercial service airports or provide general aviation access to the surrounding area.

Appendix B-1: Summary by State

State	Square Miles	Population	Public Use	Public in SASP	NPIAS Airports			New ASSET Categories				Not Classified
					Total	Primary	Nonprimary	National	Regional	Local	Basic	
Alabama	52,419	4,779,736	98	80	75	5	70		18	25	13	14
Alaska	663,267	710,231	408	287	257	29	228		3	68	126	31
Arizona	113,998	6,392,017	79	78	58	9	49	2	10	18	14	5
Arkansas	53,179	2,915,918	99	90	77	4	73	1	11	28	12	21
California	163,696	37,253,956	255	247	191	27	164	9	47	69	19	20
Colorado	104,094	5,029,196	76	65	49	11	38	2	2	27	7	
Connecticut	5,543	3,574,097	23	19	13	2	11	2	3	4		2
Delaware	2,489	897,934	11	10	4		4	1	1	1		1
Florida	65,755	18,801,310	129	125	100	19	81	9	32	28	9	3
Georgia	59,425	9,687,653	109	99	98	7	91	4	18	38	14	17
Hawaii	10,931	1,360,301	15		15	7	8				2	6
Idaho	83,570	1,567,582	119	73	37	6	31		1	16	8	6
Illinois	57,914	12,830,632	113		86	8	78	5	9	35	9	20
Indiana	36,418	6,483,802	107	68	65	4	61	1	16	32	11	1
Iowa	56,272	3,046,355	117	109	78	6	72		7	41	16	8
Kansas	82,277	2,853,118	141	134	79	4	75		10	34	18	13
Kentucky	40,409	4,339,367	60	59	55	5	50		7	21	11	11
Louisiana	51,840	4,533,372	75	67	56	7	49		9	19	7	14
Maine	35,385	1,328,361	68	36	35	5	30		2	13	7	8
Maryland	12,407	5,773,552	37	34	18	3	15	2	5	6		2
Massachusetts	10,555	6,547,629	40	38	22		22	4	5	10		3
Michigan	96,716	9,883,640	229	105	95	13	82	2	12	49	14	5
Minnesota	86,939	5,303,925	154	126	97	7	90	3	7	49	22	9
Mississippi	48,430	2,967,297	80	74	73	7	66		10	15	16	25
Missouri	69,704	5,988,927	132	111	76	4	72	2	8	33	16	13
Montana	147,042	989,415	120	114	70	7	63		1	25	33	4
Nebraska	77,354	1,826,341	85	83	72	3	69		5	26	19	19
Nevada	110,561	2,700,551	49	44	30	5	25	1	2	6	15	1
New Hampshire	9,350	1,316,470	25	24	15	1	14	2	4	6	1	1
New Jersey	8,721	8,791,894	46	43	24	2	22	3	6	11		2
New Mexico	121,589	2,059,179	62	50	50	4	46		9	11	13	13
New York	54,556	19,378,102	141	91	89	14	75	1	15	18	10	31
North Carolina	53,819	9,535,483	112	72	72	9	63	2	18	29	10	4
North Dakota	70,700	672,591	89	87	53	6	47		1	18	17	11
Ohio	44,825	11,536,504	169	107	100	6	94	4	17	55	13	5
Oklahoma	69,898	3,751,351	140	111	101	3	98	2	5	37	14	40
Oregon	98,381	3,831,074	97	92	57	6	51	2	9	22	9	9
Pennsylvania	46,055	12,702,379	132	123	63	8	55	4	18	25	4	4
Rhode Island	1,545	1,052,567	8	6	6	2	4		1	3		
South Carolina	32,020	4,625,364	68	55	53	6	47	1	13	18	6	9
South Dakota	77,116	814,180	74	69	58	4	54		2	11	27	14
Tennessee	42,143	6,346,105	81	78	69	5	64	1	12	33	9	9
Texas	268,581	25,145,561	396	292	209	25	184	8	29	86	32	29
Utah	84,899	2,763,885	46	44	36	2	34	1	7	8	12	6
Vermont	9,614	625,741	16	15	12	1	11		1	8		2
Virginia	42,774	8,001,024	66	52	48	9	39	1	12	17	7	2
Washington	71,300	6,724,540	137	131	64	11	53	1	10	21	11	10
West Virginia	24,230	1,852,994	35	24	23	5	18		3	9	4	2
Wisconsin	65,498	5,686,986	133	96	87	8	79	1	12	43	12	11
Wyoming	97,814	563,626	41	33	33	8	25		1	11	12	1
American Samoa	76	66,000	3	2	3	1	2				2	
District of Columbia	68	601,723	3									
Guam	212	181,000	1		1	1						
Midway Atoll	2	60	1									
North Mariana Islands	179	48,000	5		4	3	1				1	
Puerto Rico	3,435	3,979,000	12	11	11	6	5		1		4	
Virgin Islands	133	110,000	2		2	2						
Total	**3,798,120**	**313,129,598**	**5,169**	**4,083**	**3,324**	**372**	**2,952**	**84**	**467**	**1,236**	**668**	**497**

Appendix B-2: List of General Aviation Airports in the Four New Categories

EXPLANATION OF TERMS AND ABBREVIATIONS USED IN APPENDIX B-2

City	The city associated with the airport.
Airport	The official name of the airport or designated abbreviation.
Locid	The unique airport location identifier for an airport.
Ownership	Indicates type of airport ownership: Public – PU Private – PR Military – MA (Air Force), MN (Navy), MR (Army)
Service Level	Commercial Service – CommSer Reliever General Aviation – Gen Avia
Category	Airports serving mostly general aviation operations have been divided into four categories based on existing aviation activity. These categories are: National Regional Local Basic

COLORADO

City	Airport	Locid	Public/ Private	Service Level	Category
Akron	Colorado Plains Rgnl	AKO	PU	Gen Avia	Local
Alamosa	San Luis Valley Rgnl/Bergman Field	ALS	PU	CommSer	Local
Boulder	Boulder Muni	BDU	PU	Gen Avia	Local
Buena Vista	Central Colorado Rgnl	AEJ	PU	Gen Avia	Local
Burlington	Kit Carson County	ITR	PU	Gen Avia	Local
Canon City	Fremont County	1V6	PU	Gen Avia	Local
Colorado Springs	Meadow Lake	FLY (00V)	PR	Reliever	Local
Cortez	Cortez Muni	CEZ	PU	CommSer	Local
Craig	Craig-Moffat	CAG	PU	Gen Avia	Local
Delta	Blake Field	AJZ	PU	Gen Avia	Local
Denver	Centennial	APA	PU	Reliever	National
Denver	Front Range	FTG	PU	Reliever	Regional
Denver	Rocky Mountain Metropolitan	BJC	PU	Reliever	National
Erie	Erie Muni	EIK	PU	Gen Avia	Local
Fort Morgan	Fort Morgan Muni	FMM	PU	Gen Avia	Local
Granby	Granby-Grand County	GNB	PU	Gen Avia	Local
Greeley	Greeley-Weld County	GXY	PU	Gen Avia	Regional
Holyoke	Holyoke	HEQ	PU	Gen Avia	Local
Kremmling	Mc Elroy Airfield	20V	PU	Gen Avia	Local
La Junta	La Junta Muni	LHX	PU	Gen Avia	Local
Lamar	Lamar Muni	LAA	PU	Gen Avia	Local
Leadville	Lake County	LXV	PU	Gen Avia	Basic
Limon	Limon Muni	LIC	PU	Gen Avia	Basic
Longmont	Vance Brand	LMO	PU	Gen Avia	Local
Meeker	Meeker	EEO	PU	Gen Avia	Basic
Monte Vista	Monte Vista Muni	MVI	PU	Gen Avia	Local
Nucla	Hopkins Field	AIB	PU	Gen Avia	Basic
Pagosa Springs	Stevens Field	PSO	PU	Gen Avia	Local
Rangely	Rangely	4V0	PU	Gen Avia	Local
Rifle	Garfield County Rgnl	RIL	PU	Gen Avia	Local
Salida	Harriet Alexander Field	ANK	PU	Gen Avia	Local
Steamboat Springs	Steamboat Springs/Bob Adams Field	SBS	PU	Gen Avia	Local
Sterling	Sterling Muni	STK	PU	Gen Avia	Local
Telluride	Telluride Rgnl	TEX	PU	CommSer	Local
Trinidad	Perry Stokes	TAD	PU	Gen Avia	Basic
Walsenburg	Spanish Peaks Airfield	4V1	PU	Gen Avia	Basic
Wray	Wray Muni	2V5	PU	Gen Avia	Local
Yuma	Yuma Muni	2V6	PU	Gen Avia	Basic