

**APPENDIX D:**  
**GA INDUSTRY ANALYSIS**





Aviation Management  
Consulting Group

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# General Aviation Industry Analysis

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Mead & Hunt

*Northern Colorado Regional Airport*

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December 20, 2018



December 20, 2018

Mr. Ryan Hayes, C.M.  
Project Manager Aviation Services  
Mead & Hunt  
1743 Wazee Street, Suite 400  
Denver, Colorado 80202

RE: General Aviation Industry Analysis

Dear Mr. Hayes:

Pursuant to our engagement, Aviation Management Consulting Group (AMCG) has completed a General Aviation Industry Analysis. This report conveys key findings, and observations.

The General Aviation Industry Analysis analyzes general conditions, industry trends and demographics in the market. This assessment included analyzing funding mechanisms, general aviation new aircraft deliveries, hours flown, active pilots and fuel consumption, as well as Fixed Base Operators and Specialized Aviation Service Operators.

We are pleased to have been called upon to conduct this assessment. Please contact me if you have any questions about this report. Thank you for the opportunity to be of service.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bry E Johnson". The signature is written in a cursive style with a large initial 'B' and 'J'.

Bryan E. Johnson, A.A.E.  
Consultant

<b>I. LIMITING CONDITIONS</b> .....	<b>1</b>
<b>II. GENERAL AVIATION INDUSTRY TRENDS</b> .....	<b>2</b>
A. Airports.....	2
B. Aviation Service Industry.....	2
1. Products, Services, and Facilities .....	2
a. Personal.....	2
b. Business .....	3
c. Commercial.....	3
<b>III. FUNDING MECHANISMS</b> .....	<b>4</b>
A. Introduction .....	4
B. Airport Revenues .....	4
C. Federal Aviation Administration.....	4
1. Airport Improvement Program (AIP).....	4
2. AIP Discretionary Funds .....	4
3. Non-Primary Entitlement Funds for General Aviation Airports .....	4
4. AIP Funded Hangar Development Project .....	4
D. State of Colorado .....	5
1. Aviation Fuel Tax .....	5
2. SIB Loan Program.....	5
E. Airport Sponsor Loan Program.....	5
F. Commercial Lending Institutions .....	5
<b>IV. GENERAL AVIATION INDUSTRY TRENDS</b> .....	<b>6</b>
A. Introduction .....	6
B. General Aviation New Aircraft Deliveries.....	6
C. Active General Aviation Aircraft.....	7
D. Active Pilots.....	8
E. General Aviation Hours Flown.....	9
F. General Aviation Fuel Consumption.....	10
<b>V. INDUSTRY AND MARKET FORECASTS</b> .....	<b>12</b>
A. Industry Forecasts.....	12
B. General Aviation Hours Flown.....	12
C. Active General Aviation Aircraft.....	12
D. Market Forecasts .....	13
1. Fixed Base Operators .....	13
2. Flight Training .....	13
3. Aircraft Maintenance Operators .....	14
<b>VI. FBO AND SASO BACKGROUND</b> .....	<b>15</b>
A. Fixed Base Operators (FBOs).....	15
B. Specialized Aviation Service Operators (SASOs) .....	15
1. Aircraft Charter Operators (14 CFR Part 135).....	15
2. Pilot Schools (14 CFR Part 141) .....	15
3. Aircraft Repair Stations (14 CFR Part 145).....	16

4. Fractional Companies (14 CFR Part 91, Subpart K) ..... 16

**VII. LOCAL MARKET OVERVIEW ..... 17**

A. Airport Sponsor ..... 17

B. Geographic Location ..... 17

C. Demographics ..... 18

D. Business and Industry ..... 18

E. Economic Factors ..... 18

F. Number of Registered Aircraft..... 18

G. Number of Licensed Pilots ..... 19

**VIII. SUBJECT AIRPORT OVERVIEW ..... 20**

A. Airport Description..... 20

B. Commercial Operators ..... 20

**IX. SUMMARY ..... 21**

**I. LIMITING CONDITIONS**

This report is subject to the following conditions and to other specific and limiting conditions as described by the AMCG team in this report.

1. The data utilized in compiling this report was provided by and/or obtained from sources considered reliable and authentic. Aviation Management Consulting Group (AMCG) has accepted the information provided by and/or obtained from others without audit or cross verification. As such, AMCG assumes no liability for its accuracy or correctness.
2. The estimates, conclusions, and projections contained in this report are included to assist the reader in understanding the uniqueness of the aviation services industry. As assumptions are a necessary component of future projections, the assumptions made in this report are based upon reasonable and prudent estimates. These estimates are, however, subject to unforeseen and unpredictable influences such as, competition, local, regional, national, and global economies, fuel supply volatility, pricing, and discounting, quality of management, supervision, and operating-level employees, and the implementation of effective sales, marketing, and promotional programs. Therefore, actual outcomes may vary from the estimates, projections, and conclusions contained herein.
3. It is intended that this report be considered as a total product, the components of which must not be considered independently.
4. Compensation for preparing this report is not, in any manner, contingent upon the conclusions suggested or drawn herein.
5. This report is made for the client to whom it is addressed and is delivered to the client on the condition that it is to be used by the client only for the purpose stated in the report. No reliance is to be placed on this report for any other purposes.
6. Neither all nor any part of this report (especially any conclusions reached or the identity of the individuals or the firm with which they are connected) shall be disseminated to the public through the advertising media, public relations media, news media, sales media or any other public means of communication without prior written consent and approval of the individuals or the firm.

## **II. GENERAL AVIATION INDUSTRY TRENDS**

### **A. Airports**

Communities across the United States depend on general aviation airports to facilitate air transportation, which both builds and sustains local economies. While general aviation airports support a full range of activities including such important public services as medical transport, law enforcement, fire protection, etc., perhaps the most important role of general aviation airport is to provide business access to the community.

### **B. Aviation Service Industry**

Air transportation services and/or aircraft ground services are provided by Fixed Base Operators (FBOs) and Specialized Aviation Services Operators (SASOs). FBOs are defined as a commercial operator engaged in the sale of products and services and the renting or subleasing of facilities consistent with an airport's minimum standards for commercial aeronautical activities. A SASO is defined as a commercial operator that provides any one or a combination of the following activities: aircraft maintenance, avionics or instrument maintenance, aircraft rental or flight training, aircraft charter or aircraft management, aircraft sales, and other commercial aeronautical activities consistent with an airport's minimum standards for commercial aeronautical activities.

At this time, it is estimated that there are approximately 3,500 FBOs and in excess of 20,000 SASOs in operation in the United States at airports having a paved runway of 3,000 feet or more. The 3,000 foot runway length is important as it is normally recognized as the minimum runway length required to accommodate the majority of general aviation aircraft. For higher altitude airports, however, considering the effects of density altitude, longer runways in the 5,000 to 6,000 foot range are typically required to achieve the same safety and performance parameters.

#### **1. Products, Services, and Facilities**

The products, services, and facilities that are offered in the general aviation marketplace have been predicated primarily on the demand created by four distinctly separate operating classifications within the marketplace –personal, business, commercial, and government. These segments are defined and briefly examined, as follows:

##### **a. Personal**

In many respects, aircraft owners and operators who have committed time and financial resources to this segment of the industry have done so because of a sheer love of aviation. The “romance factor”, which has enthralled both young and old alike, is a very important element in understanding the relationship between people and flying machines.

The aircraft utilized for personal flying are typically based at general aviation airports, both public and private. For the most part, the aircraft used for personal flying are single-engine and light multi-engine piston-powered aircraft, although some larger aircraft, including turbine-powered aircraft, are also used for this purpose.

According to the General Aviation Manufacturer's Association (GAMA), there were 211,000 active aircraft being used in the United States in 2016. This segment of the market is typically price oriented, seeking the best price for the service.

### ***b. Business***

The business segment of the market is viewed as integral to the long-term growth and development of the general aviation industry. As of 2016, this segment was comprised of approximately 26,000 active aircraft, including approximately 11,000 turboprop and jet aircraft, in the United States. It is estimated that business flights make up over 17% of the approximately 25 million hours flown by general aviation each year (GAMA 2017).

One of general aviation's most important roles in the economy of the United States is enhancing the profitability and competitive strength of United States companies and industries. Companies that take advantage of general aviation routinely outperform businesses relying solely on the airlines for travel. Studies have shown that, on average, Standard & Poor's 500 firms that use general aviation to transport management teams, employees, business partners, and customers earned approximately 70% more total return to shareholders than those that do not utilize general aviation (NexaAdvisors 2017). This analysis revealed a correlation between firms utilizing general aviation aircraft and return on equity. It did not conclude that the use of general aviation aircraft increased financial performance.

While approximately 3% of general aviation aircraft are registered to Standard & Poor's 500 firms, the majority of business aircraft are operated by smaller companies. In the Business Aviation Factbook (2017), National Business Aviation Association indicates that 59% of companies operating business aircraft employ fewer than 500 employees and 70% have fewer than 1,000 employees. The business segment of the market is typically service oriented, seeking the best service for the price.

### ***c. Commercial***

Commercial aviation is a significant economic engine as it represents companies that use general aviation aircraft for commercial purposes including flight instruction, air taxi (non-scheduled, on-demand), medical transportation (air ambulance), sightseeing, aerial observation (e.g., pipeline/power-line patrol/inspection), aerial application (e.g., agriculture, photography, firefighting, etc.), cargo, and much more. This segment is comprised of more than 40,000 active aircraft. It is estimated that general aviation aircraft used for commercial purposes make up about 64% of the 25 million hours flown by general aviation each year (GAMA 2017). The commercial segment of the market is typically value oriented, seeking the best combination of service and price.

### **III. FUNDING MECHANISMS**

#### **A. Introduction**

Under Airport Assurance 24, the Federal Aviation Administration (FAA) requires that any federally obligated airport be as financially self-sustaining as possible given the circumstances that exist at the airport. Potential funding sources include the airport revenues, FAA, State of Colorado, airport sponsor loan program, and commercial lending institutions.

#### **B. Airport Revenues**

The airport sponsor generates revenues from several sources including rents (e.g., commercial and non-commercial land and improvement leases), fees (e.g., fuel flowage fees, landing fees, etc.) and other miscellaneous fees and charges.

#### **C. Federal Aviation Administration**

Four key areas of potential funding sources from the FAA include the following:

1. *Airport Improvement Program (AIP)*

AIP provides grants to airport sponsors for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS). For general aviation airports, the grant covers a range of 90 to 95 percent of eligible costs, based on statutory requirements.

2. *AIP Discretionary Funds*

Distribution of AIP discretionary funds is based on national airport system priorities and objectives with the highest priority given to projects that enhance safety, capacity, security, and preserving airport infrastructure, meeting FAA standards and environmental concerns. Remaining funds are distributed to a discretionary fund that are distributed according to a prioritization formula.

3. *Non-Primary Entitlement Funds for General Aviation Airports*

Non-primary entitlement funds are specifically allocated for eligible general aviation airports that show justified airfield development. Eligible airports receive money on an annual basis for approved projects. Airport operational costs such as salaries, mowing equipment, and supplies are not eligible for entitlement funds.

4. *AIP Funded Hangar Development Project*

The AIP reauthorization “Vision100 – Century of Aviation Reauthorization Act,” included a provision that allows the use of AIP funds for revenue-producing facilities, such as hangars or fuel farms. The Federal share of the cost of allowable revenue-producing facilities can only be funded with non-primary entitlements. Discretionary funds cannot be used for the Federal share of these project costs.

The intent of the statute is to support the construction of “new” facilities which “add additional revenue producing capability” for the facility; however, the FAA will review acquisition of existing facilities on a case-by-case basis. Improvements to existing facilities requires approval from the FAA. Replacement of facilities is only allowed if there is a demonstrated need and the replacement increases capacity.

#### **D. State of Colorado**

Two key areas of potential funding sources from the State of Colorado include the following:

##### *1. Aviation Fuel Tax*

The Aviation Fuel Tax is the mechanism used to support Colorado public-use airports. Fuel taxes are used to support airport growth and development at the local level through discretionary aviation grants (mostly used to support larger AIP projects) and airport fuel disbursements. The aviation fuel tax disbursement is the portion of the tax that is collected at the Airport. For additional details please visit, <https://www.codot.gov/programs/aeronautics/FuelTax>. The Colorado Discretionary Aviation Grant (CDAG) program enhances airport development through a competitive process. Most AIP eligible projects are supported through the CDAG.

##### *2. SIB Loan Program*

The Colorado Division of Aeronautics in conjunction with the Colorado Department of Transportation administers the State Infrastructure Bank (SIB) Loan Program. Colorado public-use airports are encouraged to develop and support airport projects through the low-interest revolving loan program. SIB loans can be used for multiple capital improvement projects such as equipment acquisition, pavement, etc. SIB information is available at <https://www.codot.gov/programs/aeronautics/SIB>.

#### **E. Airport Sponsor Loan Program**

In the event FAA/state funding is not available, the airport sponsors may, in certain situations, finance development at airports typically related to hangars. Under this situation, the airport sponsor funds the original development and the tenant repays the airport sponsor based on a specific repayment schedule or arrangement.

#### **F. Commercial Lending Institutions**

In the event FAA/state funding is not available, airport sponsors and/or interested parties may secure a loan from a commercial lending institution which will charge market-based interest rates which may not be as attractive as those available from public agencies.

#### IV. GENERAL AVIATION INDUSTRY TRENDS

##### A. Introduction

For the purposes of this analysis, national general aviation trends, including general aviation new aircraft deliveries, active general aviation aircraft, general aviation hours flown, active pilots, and general aviation fuel consumption were analyzed. General aviation is a term used to describe a diverse range of aviation activities which includes all segments of the aviation industry except commercial air carriers and military. This includes recreational flying in single engine aircraft, up to corporate business jets. The key findings follow.

##### B. General Aviation New Aircraft Deliveries

General aviation new aircraft deliveries by United States manufacturers reached a high of 17,811 in 1978 and then experienced a significant decline until bottoming out in 1994 at an industry low of 929 units. The significant decline during this period can be attributed to a number of factors including:

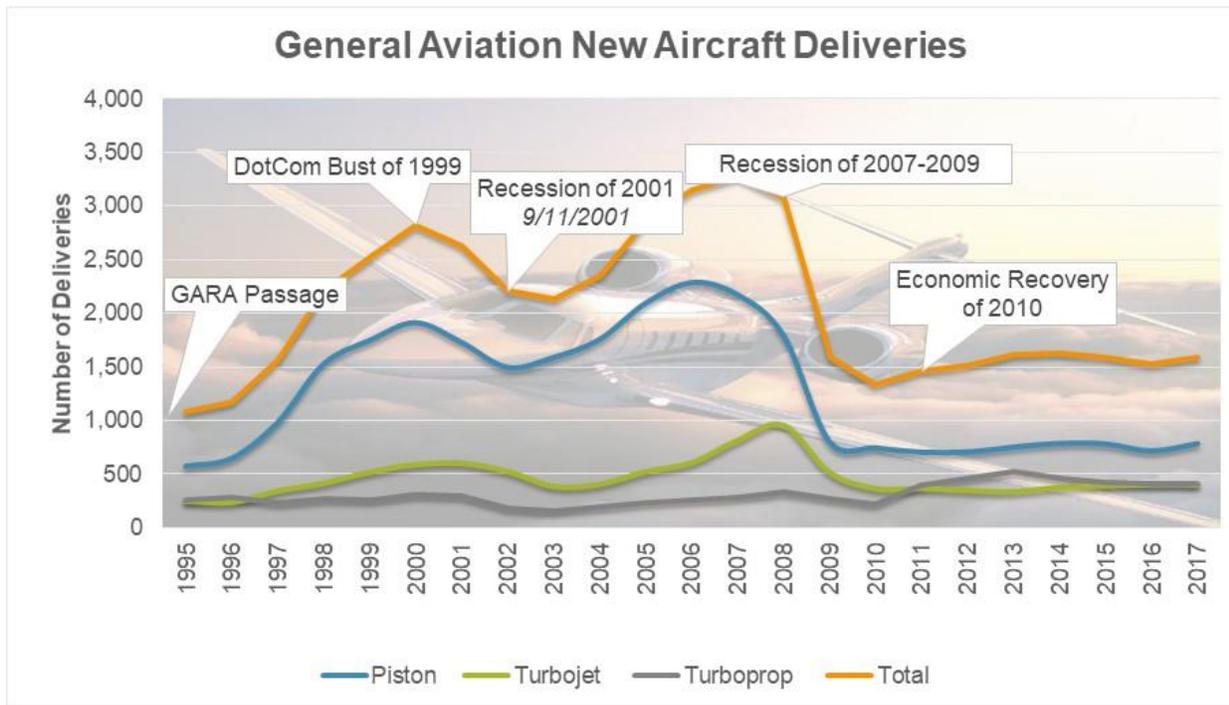
- Increased aircraft acquisition costs (relating primarily to the rising costs associated with product liability insurance)
- Increased operating costs (insurance, maintenance, fuel, etc.)
- Implementation of the “luxury” tax in 1986 and repeal of the Investment Tax Credit
- Increased air carrier service capabilities including regional and commuter carriers

Following this decline, general aviation aircraft deliveries increased from 929 annual shipments in 1994 to 3,279 annual shipments in 2007 which represents an increase of 253% or a compounded annual increase of 10.2% over the period. This significant increase was attributed to several factors, as follows:

- The passage of the General Aviation Revitalization Act (GARA) in 1994 that limited the liability of aircraft and aircraft parts manufacturers to 18 years
- The proliferation of fractional aircraft ownership programs
- A strong economy during the late 1990s to the mid-2000s (including low interest rates)
- Entrance by new aircraft manufacturing companies
- Introduction of new technologies (e.g., composite materials and glass cockpits).

Subsequently, annual general aviation new aircraft deliveries decreased sharply from 3,279 in 2007 to 1,334 in 2010 due to the economic recession. From 2010 to 2017, general aviation aircraft new deliveries increased from 1,334 deliveries to 1,596 deliveries which represents an increase of 19.6% or a compounded annual increase of 2.6%.

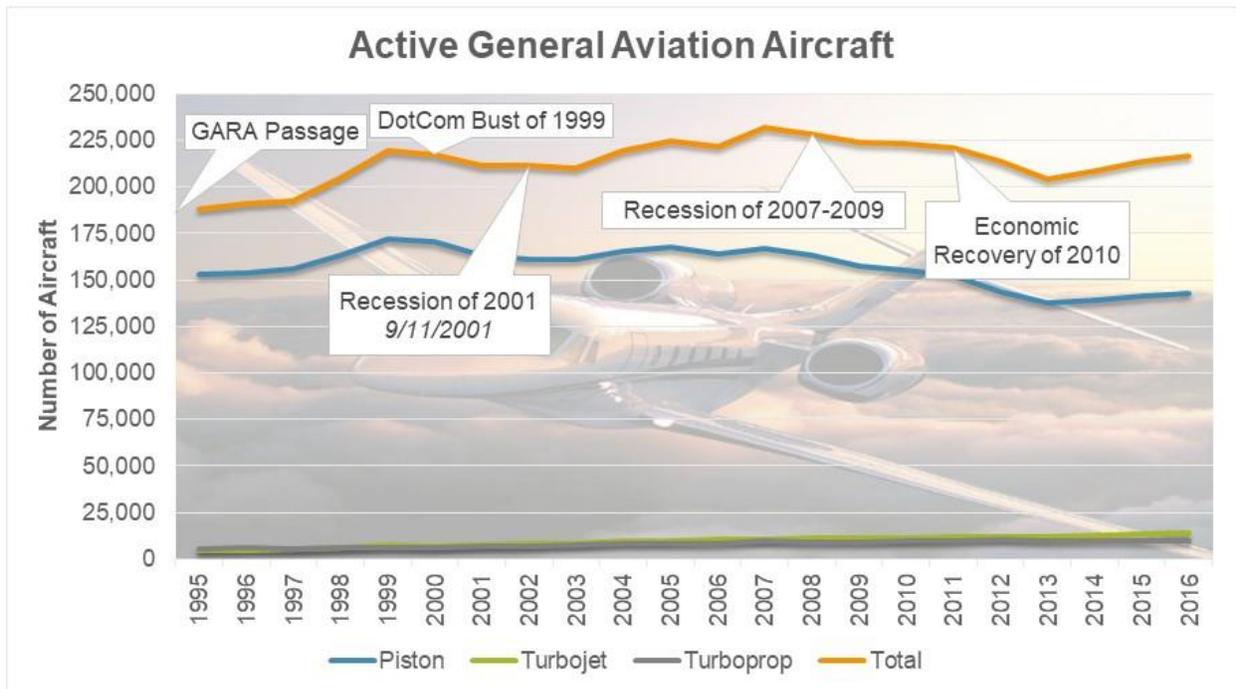
Figure 1 – General Aviation New Aircraft Deliveries



**C. Active General Aviation Aircraft**

As with new general aviation aircraft deliveries, the number of active general aviation aircraft hit a low in 1994 of 172,936. Since that time, the number of active aircraft increased to a high of 231,607 in 2007. This increase was attributed to the growth of experimental and turbine aircraft, the resurgence of new aircraft manufacturing (i.e., the growth of new aircraft deliveries and the number of companies developing Supplemental Type Certificate programs to modify and keep the aging aircraft fleet active). However, since the peak in 2007, active aircraft has dropped year after year. From 2007 to 2016 active aircraft decreased to 216,257 which represents a decrease of 6.6% or a compounded annual change of -0.8%. Active general aviation aircraft is forecasted by the Federal Aviation Administration (FAA) to decrease 0.1% annually through 2026.

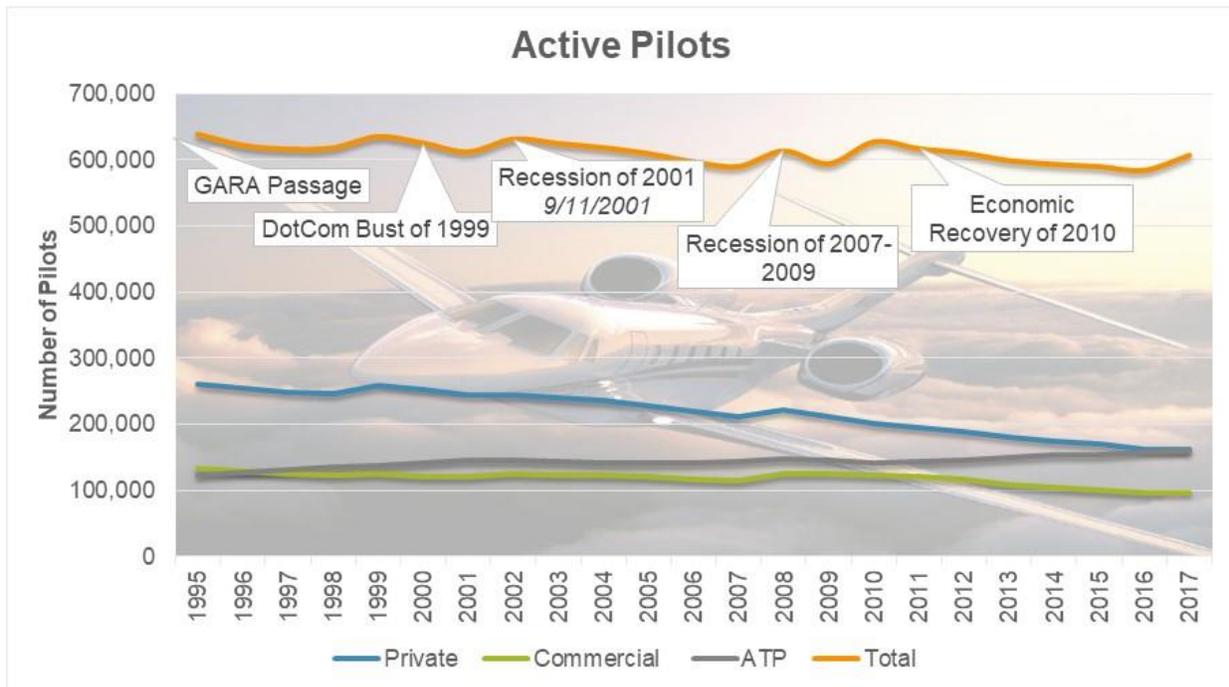
Figure 2 – Active General Aviation Aircraft



#### D. Active Pilots

The number of active pilots in the United States decreased throughout the 1980s and 1990s. Since peaking at 827,071 in 1980, the number of active pilots has declined 29.3% or a compounded annual decrease of 1.0% to 584,362 active pilots in 2016. During this overall decrease, the number of active pilots increased slightly in the late 1990s and early 2000s which can be attributed to pilot development programs. With minor fluctuations, the number of active pilots has remained relatively consistent since 2006. However, the number of active pilots increased to 607,306 in 2017 which represents an increase of 2.3% or a compounded annual change of 0.8%. Out of the 607,306 active pilots in 2017, 106,692 or approximately 17.6% hold a Certified Flight Instructor certificate and 306,066 or 50.5% hold instrument ratings.

Figure 3 – Active Pilots



**E. General Aviation Hours Flown**

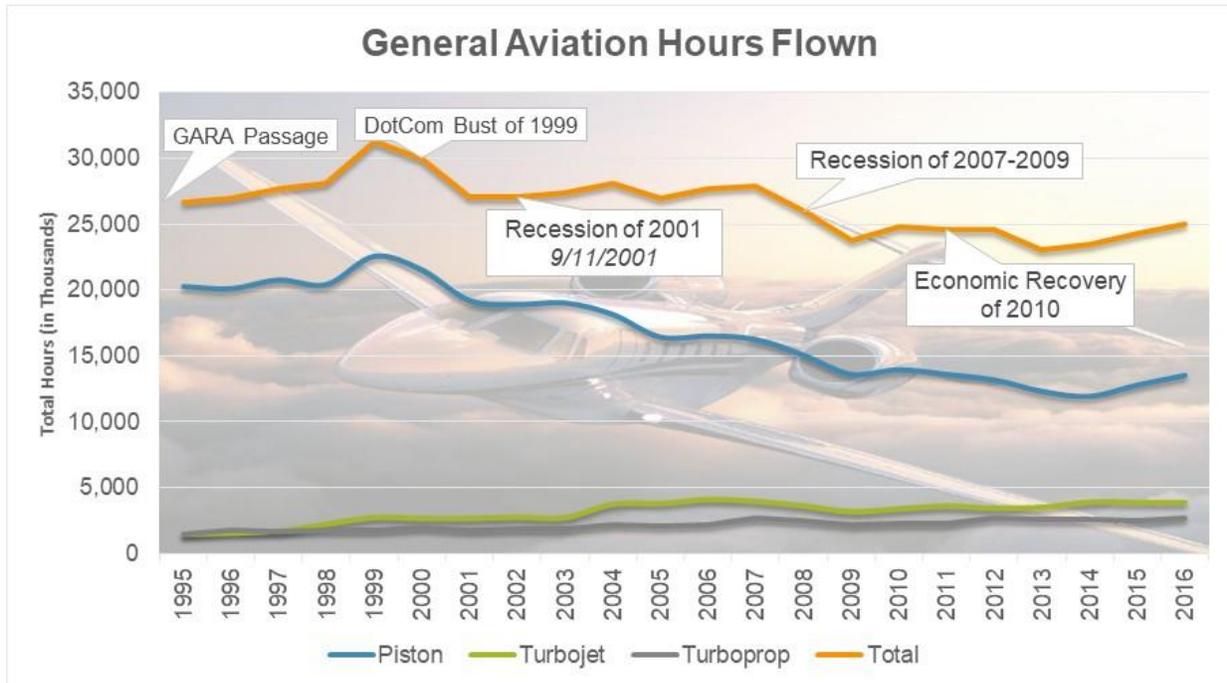
The total number of general aviation hours flown in the United States reached a low in 2013 of 23,009,000 hours, which represents a decrease of 43.9% and a compounded annual decrease of 1.7% over the period from the high of 41,017,000 hours achieved in 1980 (which corresponds with the first-year data was available). Since 2013, the number of general aviation hours flown increased to 24,986,000 in 2016 which represents an increase of 8.6% or a compounded annual change of 2.8%. General aviation hours flown is forecasted to increase 0.6% annually through 2026.

While the number of hours flown by piston-powered aircraft have fluctuated (declining for the most part) since the early 1980s, the number of turboprop and turbojet aircraft hours flown have been cyclical over this same period. However, turbine aircraft hours have increased from 3,572,000 in 1980 to 6,554,000 in 2016 (an increase of 83.5% or a compounded annual increase of 2.4%). These fluctuations can be attributed, in large part, to changes in the economy.

At first glance, the increase in the number of active general aviation aircraft since 1994 and the decline in general aviation hours flown appear to be contradictory. However, these divergent trends are supported by the decline in the average number of hours flown per aircraft which has decreased from a high of 194.4 hours per aircraft in 1980 to a low of 106.1 hours per aircraft in 2009 (which represents a decrease of 45.4% or a compounded annual decrease of 2.1% over the period).

Average number of hours flown by aircraft has increased slightly since 2009 to 115.5 in 2016 which represents an increase of 8.9% or a compounded annual increase of 1.2% over the period.

**Figure 4 – General Aviation Hours Flown**

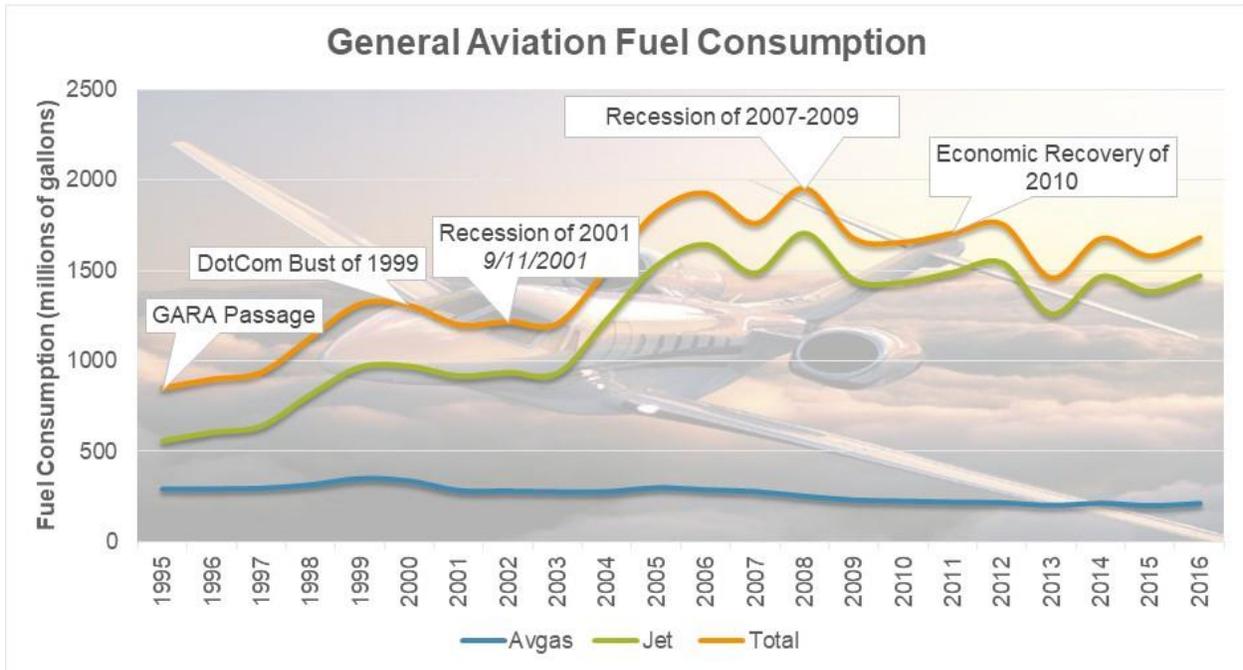


**F. General Aviation Fuel Consumption**

Total general aviation fuel consumption increased from 702,800,000 gallons in 1993 to 1,926,000,000 gallons in 2016. This represents a total increase of 174.0% or a compounded annual increase of 8.1%. This trend can be attributed to an increase in aircraft manufacturing, expansion of fractional aircraft ownership, and a robust economy (particularly in the late 1990s). Since 2006, general aviation fuel consumption decreased to 1,679,500,000 gallons in 2016 which represents a total decrease of 12.8% or a compounded annual change of -1.0%.

While aviation gasoline volumes declined through 1994 (except for small increases in 1984 and 1990), jet fuel volumes experienced several cycles of growth and decline throughout the same period. The dramatic drop in jet fuel volumes from 1989 to 1993 and the impressive recovery since 1994 are indicative of the resurgence in activity the industry has enjoyed since that time.

Figure 5 – General Aviation Fuel Consumption



## V. INDUSTRY AND MARKET FORECASTS

### A. Industry Forecasts

The following are based on forecasts developed by the Federal Aviation Administration (FAA) and leading aviation industry product manufacturers (including GAMA and Honeywell Aerospace's Business Aviation Outlook).

- General aviation aircraft hours flown are forecast to increase at an average annual rate of 0.9% through 2037.
- General aviation aircraft fuel consumed is forecast to increase at an average annual rate of 1.7% through 2037. Jet fuel consumption is forecast to increase at an average of 1.9% during this same period while avgas consumption is forecast to decrease an average of 0.4% annually through 2037.
- Active general aviation aircraft is forecast to increase at an average annual rate of 0.1% through 2037 with the business jet segment of general aviation aircraft forecast to have growth of 2.3% annually over the same time period.
- In 2016, aircraft shipments manufactured worldwide increased to 2,324 aircraft deliveries, while billings increased to \$23.9 billion, the second-highest industry billing number ever recorded.

It is anticipated that increased aircraft manufacturing and general aviation hours flown will translate into additional general aviation fuel demand (volumes). It is expected that as the number of active aircraft increase, the demand for FBO products, services, and facilities (i.e., terminal buildings and aircraft parking, tiedown, and hangar space) will increase as well. In addition, as activity levels increase, the general aviation services industry will strengthen.

### B. General Aviation Hours Flown

As stated above, the general aviation aircraft hours flown are forecast to increase at an average annual rate of 0.9% through 2037 which is driven by a growing United States and world economies especially in the turbojet, turboprop, and turbine rotorcraft markets.

### C. Active General Aviation Aircraft

General Aviation New Aircraft Deliveries (National) is determined to have a positive impact on demand at the Airport. As stated above, active general aviation aircraft are forecast to increase at an average annual rate of 0.1% through 2037 with the business jet segment of general aviation aircraft forecast to have growth of 2.3% annually over the same period.

## D. Market Forecasts

### 1. Fixed Base Operators

The FBO industry has, from its inception, imitated the classic economic model for the lifecycle of a business; concept (1920s to the 1950s), expansion (1950s through the late 1970s), maturity (late 1970s through the early 1980s), and decline (early 1980s through the early 1990s). Today, however, the number of FBOs (supply) is now more in line with the level of demand that exists for FBO products, services, and facilities and is beginning to see a restart of the lifecycle similar to the expansion experienced in the 1950s through the late 1970s. However, the expansion will not be as dramatic and will be controlled by experienced business investors as opposed to just those individuals with a passion for the industry.

At this time, it is estimated that there are approximately 3,500 FBOs and in excess of 20,000 SASOs in operation in the United States at airports having a paved runway of 3,000 feet or more. The 3,000 number is important as it is normally associated to be the minimum runway length to accommodate the majority of general aviation aircraft. For higher altitude airports, however, considering the effects of density altitude, longer runways in the 5,000 - 6,000 foot range are typically required to achieve the same safety and performance parameters.

Since 2003, the number of FBOs in operation in the United States at airports having a paved runway of 3,000 feet or more has increased by approximately 3.3%, or a compounded annual average of 0.2%.

Additionally, the FAA Aerospace Forecasts (FY 2018 – 2038) forecasts total fuel volumes to increase at 1.4% throughout the period which is a major driver for the FBO industry. Out of the approximately 3,500 airports in the United States having a hard surface runway of 3,000 feet or more, approximately 76.3% of airports have one FBO and approximately 15.8% of airports have no FBO at all. Therefore, only approximately 7.9% of airports have more than one FBO. Additionally, based on AMCG's experience, airports with more than one FBO generally have total fuel volumes well in excess of 1,000,000 million gallons.

### 2. Flight Training

Industry forecasts for flight instruction over the 20-year planning horizon are mixed. Flight instruction activity is highly related to the number of student pilot certificates as this is the first certificate future pilots receive.

Conversely, the forecasts over the same period for the number of private pilots and commercial pilots indicate a slight decline. Over the forecast period, the FAA forecasts an increase of 7,200 total pilots.

From 2017 – 2036, the Boeing Pilot Outlook for pilots indicates that 637,000 new commercial airline pilots will be needed to fly the world fleet. In North America, the forecast for new pilots is 117,000 over the forecast period.



**3. Aircraft Maintenance Operators**

From 2017 – 2036, the Boeing Technician Outlook indicates that 648,000 new technicians will be needed to maintain the world fleet. In North America, the forecast for new technicians is 118,000 over the forecast period. It is significant to note the higher forecast for technicians as compared with new pilots through 2036.



An underlying driver to the aircraft maintenance industry is the average age of aircraft. Based on GAMA reports, the average age of all general aviation aircraft has fluctuated since 2009 (ranging from 39.5 years in 2009 to a low of 33.2 years in 2013 and increasing to 37.2 years in 2016 – the last year data was available). However, for general aviation single-engine piston aircraft, the average age in 2016 (the last year data was available) was 45.7 years.

This is further supported by the FAA’s Best Practices Guide for Maintaining Aging General Aviation Airplanes (2003) which states the average age for general aviation single-engine piston aircraft could approach 50 years by 2020. According to the FNL Airport Master Record 5010, approximately 85% of the current aircraft based at the Airport are single-engine. As these aircraft continue to age, demands for aircraft maintenance services will likely continue to increase.

## **VI. FBO AND SASO BACKGROUND**

### **A. Fixed Base Operators (FBOs)**

From a practical standpoint, the term “FBO” is defined within the context of the marketplace. Accordingly, AMCG utilizes the following definition for an FBO, “An FBO is an airport-based aircraft service organization which operates under a lease, use, or operating agreement with an airport owner or operator for the specific purpose of providing aircraft fueling and engaging in a minimum of one of six of the remaining primary product, service, and facilities areas.” It is important to note that the products, services, and facilities provided by FBOs are not limited to the general aviation segment of the market (products and services are provided to air carriers and the government as well.)

FBOs who provide aircraft fueling and engage in multiple primary products, services, and facilities are commonly known as “full service” FBOs. FBOs who provide aircraft fueling, aircraft ground handling services, and passenger/crew services and facilities only are known as “limited” FBOs. It is estimated that there are approximately 3,400 FBOs in operations in the United States at airports having a paved runway of 3,000 feet or more.

### **B. Specialized Aviation Service Operators (SASOs)**

While FBOs are more rigidly defined, a specialized aviation service operator (SASO) typically provides products and/or services in only one of the following primary product, service, or facilities categories: aircraft storage, technical services, flight services, or aircraft sales. Accordingly, SASOs provide products and services within a very narrow segment of the general aviation marketplace.

In addition, SASOs do not necessarily operate under a lease with an airport and in many cases, SASOs are subtenants of an FBO. Most importantly, SASOs do not provide aircraft fueling products and services. At this time, it is estimated that there are more than 20,000 SASOs in operation in the United States at airports having a paved runway of 3,000 feet or more.

#### **1. Aircraft Charter Operators (14 CFR Part 135)**

In the United States, there are approximately 1,339 certificated aircraft charter operators providing passenger transportation services (1,100), air ambulance transportation services (81), and air cargo transportation services (158) operating over 11,000 aircraft.

#### **2. Pilot Schools (14 CFR Part 141)**

In the United States, there are approximately 680 certificated flight schools providing flight training services consistent with 14 Code of Federal Regulations (CFR) Part 141 – Pilot Schools. However, it is important to note that there are thousands more flight schools and flight instructors providing flight training under CFR Part 61 - Certification: Pilots, Flight Instructors, and Ground Instructors versus Part 141 training. Regardless of how flight training is provided, the FAA regulates the minimum requirements for pilot training and certification.

**3. Aircraft Repair Stations (14 CFR Part 145)**

There are approximately 4,040 aircraft repair stations in the United States that are rated to provide airframe, powerplant, instrument, radio, propeller, or accessory repair and maintenance. It is important to note that some of these repair stations may be dedicated to the air carrier segment of the industry. It is also important to note that there are over 300,000 Airframe and/or Powerplant (A&P) Mechanics that either individually or through a technical service company (not certified as an aircraft repair station) that also provides technical services.

**4. Fractional Companies (14 CFR Part 91, Subpart K)**

There are two major fractional aircraft companies (NetJets and Flight Options), down from approximately six major companies. In addition, there are several smaller fractional aircraft companies that operate either specific airframes or in specific regions of the country. Combined, these companies operate approximately 800 aircraft that have approximately 4,000 aircraft owners.

**VII. LOCAL MARKET OVERVIEW**

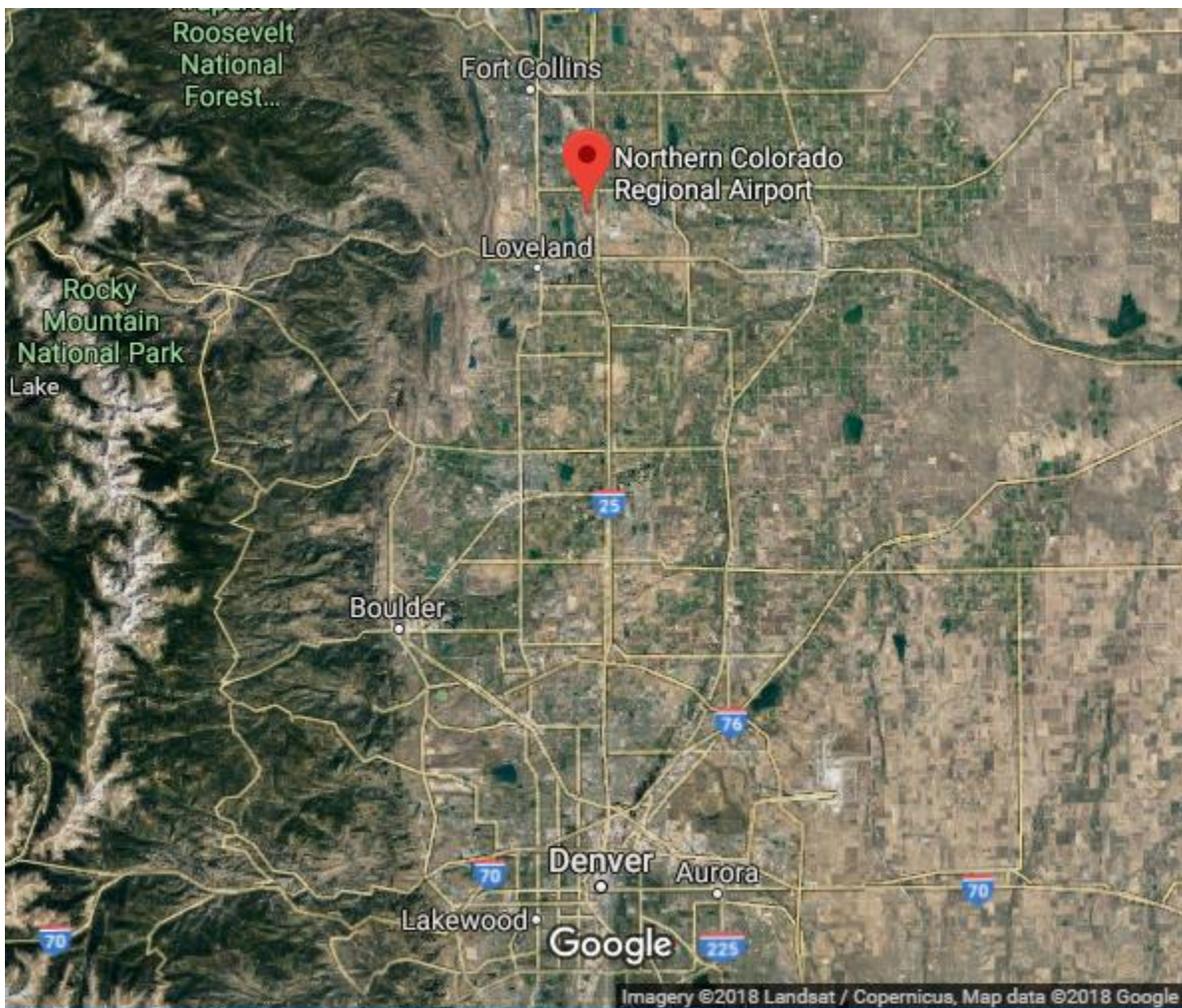
**A. Airport Sponsor**

The Airport is owned and operated jointly by the cities of Fort Collins and Loveland through the Northern Colorado Regional Airport Commission. The Northern Colorado Regional Airport Commission was established by an intergovernmental agreement between the two cities and is comprised of seven members; two members from the City of Loveland Council, two members from the City of Fort Collins Council and three citizens.

**B. Geographic Location**

The Airport is located approximately 50 miles north of Denver, Colorado and approximately 9 miles southeast of Fort Collins and 5 miles northeast of Loveland. The Airport is located east of Boyd Lake State Park. As identified in Figure 1, the Airport is located west of the Interstate 25 corridor.

**Figure 6 – Geographic Location**



**C. Demographics**

The population of the City of Fort Collins has increased a total of 21.4% or a compounded annual increase of 2.0% from 118,652 in 2000 to 143,986 in 2010 (U.S. Census Bureau). Since 2010, the population has increased to 165,080 in 2017 (U.S. Census Bureau estimate) which reflects a total increase of 14.7% or a compounded annual increase of 2.0%.

The population of the City of Loveland has increased a total of 32.5% or a compounded annual increase of 2.9% from 50,608 in 2000 to 67,049 in 2010 (U.S. Census Bureau). Since 2010, the population has increased to 76,701 in 2017 (U.S. Census Bureau estimate) which reflects a total increase of 14.4% or a compounded annual increase of 1.9%.

**D. Business and Industry**

The largest employment sectors of the City of Fort Collins are (1) educational services, health care and social assistance and (2) arts, entertainment, and recreation, and accommodation and food services. These employment sectors account for approximately 40.9% of the employment in the City of Fort Collins.

The largest employment sectors of the City of Loveland are (1) educational services, health care and social assistance and (2) retail trade. These employment sectors account for approximately 33.9% of the employment in the City of Loveland.

**E. Economic Factors**

In general, the civilian labor force of the City of Fort Collins has increased from 81,760 in 2010 to 91,205 in 2016 (U.S. Census Bureau), which represents a total increase of 11.6% or a compounded annual increase of 1.8%. The civilian labor force of the City of Loveland has increased from 34,701 in 2010 to 38,778 in 2016 (U.S. Census Bureau), which represents a total increase of 11.7% or a compounded annual increase of 1.9%.

**F. Number of Registered Aircraft**

Based on 2018 (estimated) United States Census data and FAA registered aircraft data (as of December 5, 2018), the Table 1 identifies the total and average number of registered aircraft per 1,000 residents in the United States, the State of Colorado, and the surrounding counties.

**Table 1 – Number of Registered Aircraft**

Number of Registered Aircraft				
Location	Population	Registered Aircraft	Average per 1,000 persons	Market Share
United States	329,037,263	292,356	0.89	
State of Colorado	5,607,154	6,791	1.21	2.32%
Boulder County	322,514	627	1.94	42.71%
Larimer County	343,976	315	0.92	21.46%
Weld County	304,633	526	1.73	35.83%
<b>Total (Select Counties)</b>	<b>971,123</b>	<b>1,468</b>	<b>1.51*</b>	<b>21.62%</b>

\*Average

### G. Number of Licensed Pilots

Based on 2018 (estimated) United States Census data and FAA licensed pilot data (as of December 1, 2018), Table 2 identifies the total and average number of licensed pilots per 1,000 residents in the United States, the State of Colorado, and the surrounding counties.

**Table 2 – Number of Licensed Pilots**

Number of Licensed Pilots				
Location	Population	Licensed Pilots	Average per 1,000 persons	Market Share
United States	329,037,263	637,122	1.94	
State of Colorado	5,607,154	18,995	3.39	2.98%
Boulder County	322,514	1,494	4.63	41.16%
Larimer County	343,976	1,247	3.63	34.35%
Weld County	304,633	889	2.92	24.49%
<b>Total (Select Counties)</b>	<b>971,123</b>	<b>3,630</b>	<b>3.74*</b>	<b>19.11%</b>

\*Average

## VIII. SUBJECT AIRPORT OVERVIEW

### A. Airport Description

The Airport, which consists of approximately 1,065 acres of land, has two runways, as follows:

- Runway 06/24: 2,273 feet long and 40 feet wide, asphalt in good condition.
- Runway 15/33: 8,500 feet long and 100 feet wide, grooved asphalt in good condition.

The Airport was selected to be Colorado's first airport to implement the Remote Air Traffic Control Technology, also known as the Colorado Remote Tower Project. The selection was based on the Airport's traffic mix, operational levels, proximity to Denver International Airport, and local support. Currently, Searidge Technologies is in the process of installation, testing, and certification of the remote tower equipment. Ultimately, the Remote Air Traffic Control Project utilizes advanced technology to increase air traffic efficiency and is a cost-effective solution for FNL and other Colorado public-use airports.

Once implemented and fully operational, the Airport will become what is known as a 'towered' airport with a full array of aircraft operational and radar services. This is significant to note, as such services will increase the likelihood of air carrier operations.

The Airport is served by one Instrument Landing Systems (ILS) precision approach for Runway 33 and multiple non-precision approaches (Localizer, RNAV (GPS), and VOR). The Airport is designated a Commercial Service Airport in the *FAA National Plan of Integrated Airports System (NPIAS)*. Total aircraft operations are approximately 94,896 per year and 256 aircraft are currently based at the airport, as reported by Airport Management.

### B. Commercial Operators

One fixed base operator (Fort Collins – Loveland JetCenter) provides fueling (jet and avgas), line services, and aircraft parking (hangar and tiedown). Aircraft maintenance is provided by Avionics Specialist, LLC., The New Firewall Forward and Professional Aircraft Services. Flight training and aircraft rental is provided by The Flying School, Front Range Helicopters, LLC., and Leading Edge Flight Training. Aircraft charter service is provided by Trans Aero Helicopters.

## IX. SUMMARY

Regionally, the general aviation industry is relatively healthy and growing at a reasonable rate based on current market conditions. FNL's role as a regional airport when compared with competing and comparable airports remains viable based on factors such as local community business and industry, traditional economic analysis, airport infrastructure, licensed pilots, registered aircraft and overall demographics.

Considerations supporting FNL's current and future opportunities for continued growth and success to strongly influence the region's aviation industry include:

- FNL's testing and implementation of the Remote Air Traffic Control Tower (RATCT), which once certified will add value to the airport's overall safety, efficiency and capacity. RATCT revolutionizes airport and aircraft operations and demonstrates FNL's leadership to incorporate new technology as an avenue to improve the National Airspace System (NAS).
- FNL's ability to secure the Aims Community College (ACC) flight training program from the Greeley airport becomes another avenue to increase aircraft operations through regular flight training. ACC established an airline 'bridge' program with Republic Airways, which provides new pilots a clear and direct path for student applicants to be hired immediately upon completion of the ACC program and prior to the required 1,500 hours total time (or, R-ATP of 1,250 hours total time).
- FNL's efforts to maintain and secure new types of commercial service operators (specialized aviation service operators – SASO) will increase service and support for both based and itinerant aircraft operators.
- FNL's ability, efforts and desire to secure future air service will be critical to support a select market segment known as leisure travel, which is broadly supported by such air carriers as Allegiant Air, Sun Country Airlines, and Spirit Airlines. With air service, secondary business opportunities become prevalent and a further benefit the airport.