



ALASKA

AVIATION SYSTEM PLAN

The Economic Contribution of the
Aviation Industry to Alaska's Economy

EXECUTIVE SUMMARY

June 2019

Alaska's Aviation Industry

There are **394 airports** in Alaska available for public use, ranging in size from small general aviation gravel strips to the largest and most economically important airport in the state, Ted Stevens Anchorage International Airport. An additional 362 locations are recorded as landing areas, such as private air strips, and an unknown number of remote landing areas used primarily by bush pilots. Airports support operations for approximately **8,030 pilots**, **300 air carriers**, and numerous businesses located on and near airport property. Together, the aviation industry supports the movement of people, services, and goods across Alaska's approximately **586,000 square miles** and provides critical transportation for Alaska's many remote communities. Connections between Alaska and the rest of the world are provided primarily by three international airports, which also serve as major regional hubs.

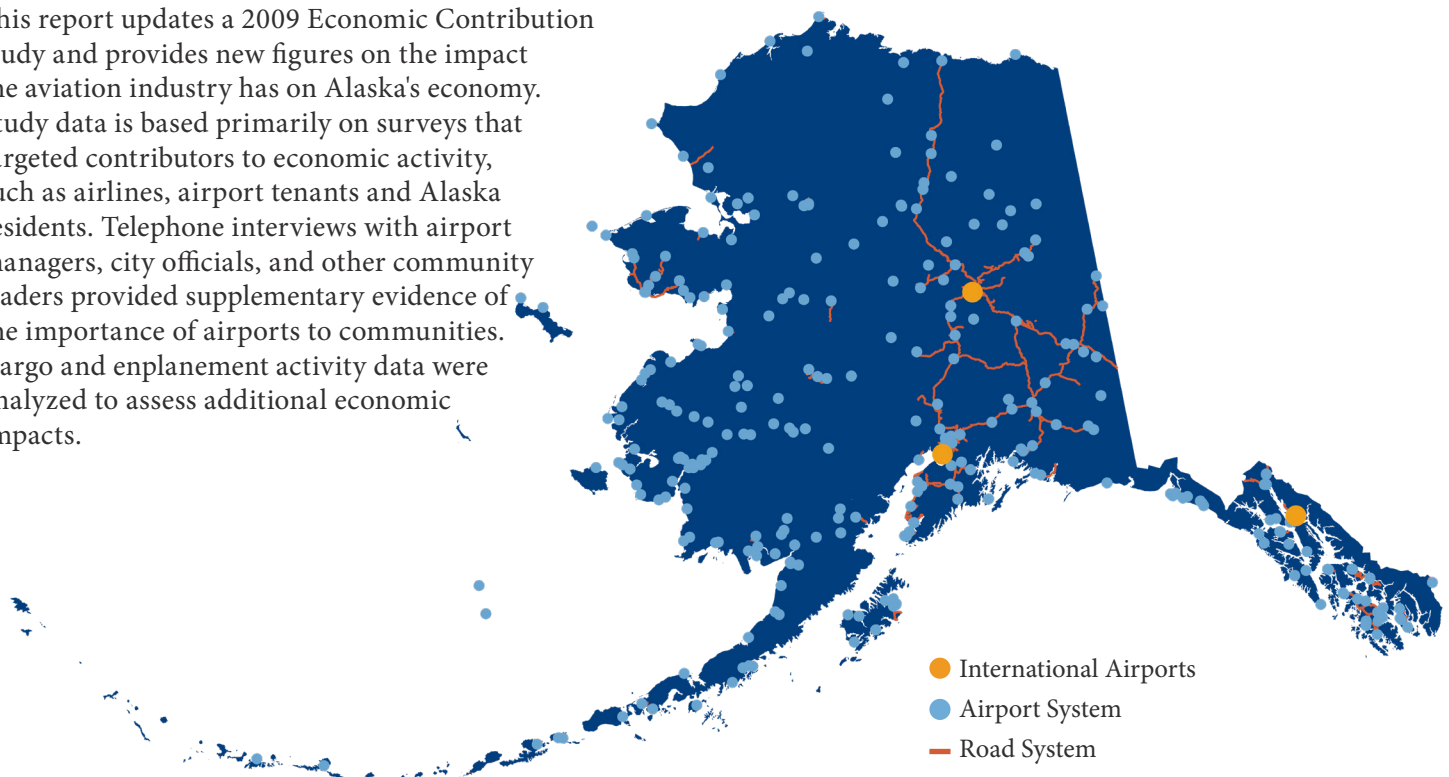


Within the large volume of public airports, the Alaska Department of Transportation and Public Facilities (ADOT&PF) owns and operates two airport systems; the **rural airport system** consisting of 237 commercial and general aviation airports and the **Alaska International Airport System** (AIAS) consisting of Ted Stevens Anchorage International (ANC) and Fairbanks International (FAI) Airports. Under the management of ANC is Lake Hood Seaplane Base, the busiest seaplane base in the world. Juneau International Airport is run by the City and Borough of Juneau and serves as the major hub for southeast Alaska.

“As a remote community we are dependent on air travel and air transport to maintain a healthy population and economy.”

— Public Airport Leaseholder

This report updates a 2009 Economic Contribution study and provides new figures on the impact the aviation industry has on Alaska's economy. Study data is based primarily on surveys that targeted contributors to economic activity, such as airlines, airport tenants and Alaska residents. Telephone interviews with airport managers, city officials, and other community leaders provided supplementary evidence of the importance of airports to communities. Cargo and enplanement activity data were analyzed to assess additional economic impacts.

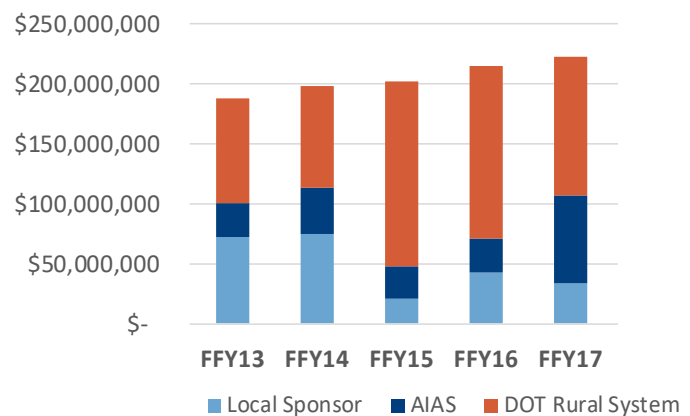


Aviation Industry Economic Output and Employment

Annual Airport Improvement Program Grant Funding in Alaska

In 2017, the aviation industry in Alaska supported more than **35,000 jobs** statewide and added more than **\$3.8 billion** to the economy by supporting local businesses that employed Alaskans in year-around operations. Nearly half the contribution, an **estimated \$1.8 billion**, was from the multiplier effect, where aviation spending generated economic activity in other sectors of the economy.

Federal Airport Improvement Program (AIP) funding constitutes a significant portion of Alaska's aviation economy. In 2017, AIP funding in Alaska totaled more than **\$222 million**, with a total economic impact of **\$586 million** and nearly **2,600 jobs**. Since program implementation in 1982, over **\$4.5 billion** in funding has helped aviation in Alaska to grow, thrive, and expand into the system seen today. This funding flowed through the FAA Alaska Region office in approximately 1,734 grants to conduct airport planning, design, and construction projects throughout the state.



Source: ADOT&PF 2018

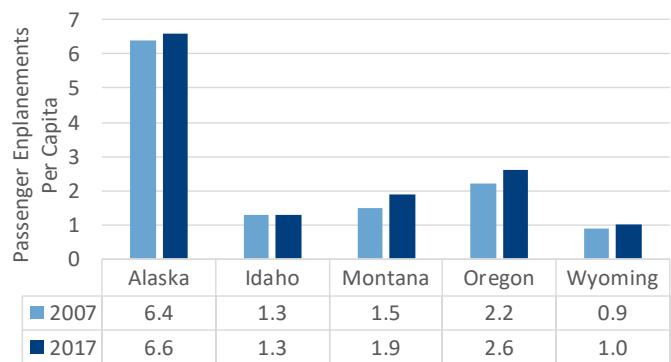
Reliance on Aviation

Aviation services are relied upon in Alaska to fulfill needs that elsewhere would be met by ground transportation. **Eighty-two percent of Alaska's communities are not connected to the contiguous road system** and the ALCAN, the only road connecting Alaska to the rest of North America.

Alaska's unique air cargo environment is defined by reliance on regional cargo carriers and the bypass mail system. Through the **bypass mail system**, palletized cargo is delivered directly to bush community retailers by independent, certified carriers. The system was established to help remote communities get access to everyday goods and supplies without overloading post offices. Both bypass mail and other intra-state cargo are nearly all funneled through ANC before heading out to 26 regional hubs, the largest of which is FAI, and finally onto over 120 remote communities. The recent emergence of e-commerce has been extremely beneficial to many residents in remote Alaska, who take advantage of offers like unlimited free shipping. Anything that can fit on an airplane has been flown to remote communities at one time or another; fresh food, retail goods, industrial supplies, building materials, ATVs, household furniture and sometimes even fuel.

Unsurprisingly, the 750,000 or so **residents of Alaska fly at nearly eight times the per capita rate of people in other parts of the US**. Personal trips and work travel were the most frequent reasons Alaska residents traveled by air. The highest rate of medically related air travel was in rural Alaska, as many communities do not have hospitals, clinics or medical services.

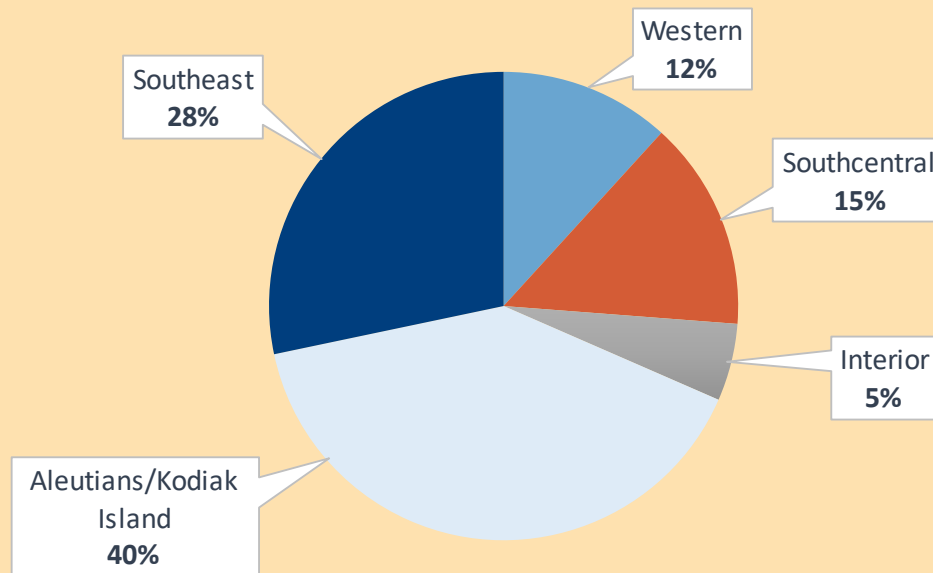
State Comparison



Essential Air Service

Essential Air Service (EAS) is a federal program used to maintain minimum levels of commercial air service to rural areas. The U.S. Department of Transportation (USDOT) determines the level of air service for each community and the carriers to provide it. If no air carriers are willing to provide service, USDOT solicits proposals for subsidized service. As of February 2019, **61 communities** in Alaska receive EAS program subsidies. This pie chart shows the distribution of EAS contract spending by Alaska region. The average annual subsidy per community is **\$399,561**.

Annual EAS Contract Program Subsidies



Source: USDOT 2018

Medical and Health Care

Aviation is a crucial element of healthcare in Alaska for both regular treatment and timely, life-saving trauma care, particularly for residents of the state's remote bush communities. Hospitals equipped for emergency services are located at several hubs across the state, but with only two facilities certified as Level II trauma centers—both located in Anchorage—many trauma patients require air transport for anything beyond stabilizing treatment.

Air medical operators fly air ambulances, specially modified aircraft that act as mobile intensive care units manned by teams of paramedics and other specialty physicians. Helicopter air ambulances are optimal for short distance transport or remote emergency

response while fixed-wing air ambulances are best for rapid and long-distance patient transport. Common air ambulances used in Alaska include Learjets, King Airs, Cessna Caravans, and Bell Helicopters.

The cost of air medical transport can reach **tens of thousands of dollars** per flight. Even with insurance, the copay can be financially crippling. Air medical operators offer paid memberships that protect against these massive out-of-pocket expenses by accepting an insurance company's paid portion of air ambulance service as payment in full. Air medical companies offer memberships to Alaskans, and Airlift Alaska also offers a membership to Southeast visitors.

Tourism and Remote Access

Alaska provides some of the most unique tourism experiences in the U.S. The state has a robust cruise ship industry in Southeast Alaska, the largest volume of public lands in the country, and the largest national park, the 13.2 million-acre Wrangell-St Elias National Park & Preserve. In the summer of 2016 alone, **over 1.85 million visitors** came to the state.

Aviation is essential to many aspects of tourism in Alaska. Visitors utilize the state's international airports as gateways, then take smaller bush planes to remote locations for activities such as hunting and fishing, wildlife viewing, trekking and backpacking, mountain climbing, skiing, and rafting. Alaska's National Parks alone are served by **over 90 air taxi companies** that offer vacation packages focused on many of these activities.



Aviation Trends

A number of trends are visible within the aviation industry today. The 2008–2009 recession affected the aviation industry nationally, with general aviation, commercial service, and cargo activity all experiencing dramatic declines before gradual recoveries. Post recession years measure higher airline load factors, resulting in enplanement growth at higher rates than operations.

The recession also caused a dramatic decline in the shipment of new aircraft, a metric that has not recovered. In Alaska and across the country, the average age of general aviation aircraft continues to rise, reaching 50 years in Alaska in 2017. Additionally, fewer new pilots are entering the industry. The increased cost of flight training and stricter regulations have led to both a pilot shortage and an aging pilot population. In the last five years, the national pilot population decreased by nearly **four percent**, while it decreased by **seven percent** in Alaska over this period.

Technological advancements, many of which are being introduced under the FAA's NextGen banner, are aiming to improve safety and efficiency. Air navigation coverage

by the Wide Area Augmentation System (WAAS) has expanded to provide nearly all of Alaska with excellent service, while ADS-B can communicate critical information such as aircraft position and speed to both air traffic control and other aircraft.

A more immediate concern is Alaska's lack of adequate coverage by automated weather reporting, an issue caused by a shortage of FAA-certified weather stations. Instrument operations are limited to stations certified in the FAA's Weather Message Switching Center Replacement, excluding comparable systems such as that of the National Weather Service. For visual operations, pilots use Alaska's vast system of over **230 weather cameras**, which are dependent on daylight for use. Groups such as the Aircraft Owners and Pilots Association are advocating the FAA to improve weather data access in Alaska for both instrument and visual flights.

"Any time the airport has to close, or if flights cannot get in or out due to weather, the results are felt almost immediately by the entire region."

– Rural Alaska Airport Manager

State of Alaska

DOT&PF International Airport System

Ted Stevens International Airport (ANC) and **Fairbanks International Airport** (FAI) are the two largest airports in Alaska. Together they act as the main hubs connecting airports across the state, provide the vast majority of connections to locations outside the state and provide a reliable stopover for air cargo flights between Asia and North America.

Cargo Hubs

The single sector that provides AIAS the most revenue is air cargo. Both airports are primary regional hubs for distribution of cargo to their respective cities and to locations throughout Alaska. The airports also provide a reliable and convenient refueling stop for air cargo flights operating between Asia and the Americas. International cargo flights refuel at ANC, but air carriers rely on the certainty of an alternate refueling at FAI should ANC not be available.

ANC was ranked second in the United States for landed weight of cargo in 2017, second only to Memphis, where FedEx is based. ANC saw over 2.7 million tons of cargo with the top carriers being Cathay Pacific Airways and UPS. The East-West path through ANC has been particularly important for the shipment of electronics.

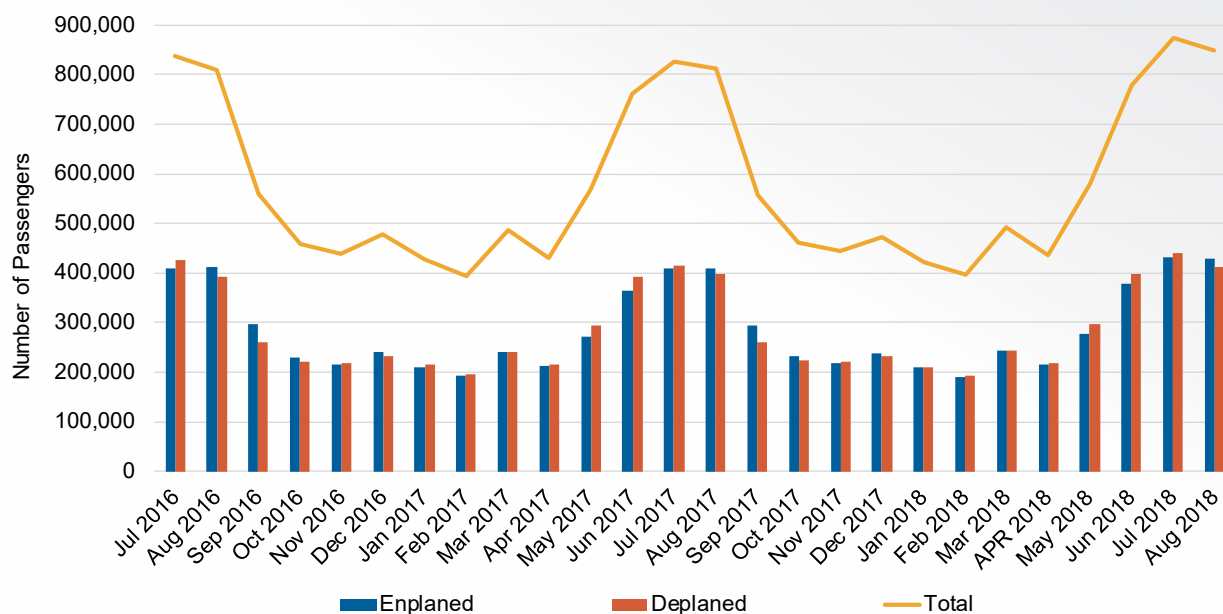
The majority of ANC cargo was considered 'transit' cargo; it did not leave the plane during the refueling stop. In 2017, **about 63 percent of all ANC cargo was transit**. Much of the remaining cargo was destined for sorting at the UPS or FedEx facilities at ANC and then redistributed on flights to locations outside Alaska. Only a small portion of the cargo originated from or was destined to locations in Alaska.

The advantage for the international cargo refueling stop in Alaska is that it allows cargo carriers to load more cargo onto their planes. This makes the trip more economical than flying the longer direct route with a lesser load. In addition, expansive cargo rights exclusive to ANC and FAI enable carriers to transfer cargo between aircraft for more efficient distribution between multiple locations.

Passenger Travel

The number of people in Alaska greatly increases in the summer months due to tourism. Air travel in the summer months is almost twice the level of the winter holiday season. **From June to August ANC and FAI together accommodate up to about 800,000 passengers per month, which is the equivalent of moving slightly more than the entire state population each month!** Even during the relatively slower winter months, the two airports together move the equivalent of more than half the state population every month.

ANC and FAI Passenger Activity



Future Aviation Industry Challenges

A survey of airport managers and leaseholders identified issues faced by members of the aviation community. The number one concern for airport managers was lack of materials and maintenance funding. Dips and cracks on runways were common concerns for several smaller airports; about half of survey respondents commented on the **need for runway repairs or improvements**. Climate change was noted as having a significant effect on runway degradation as well as increased winter rain/ice being a threat to safe operations.

Among survey leaseholders, the primary concern is the ability to find skilled and dependable labor. Several factors contribute to this issue. For example, it is often difficult to find qualified workers in smaller communities to work both on the airport or for an air carrier. Turnover rates are high while populations in many areas with job vacancies are low.

The average **pilot population is aging**, both in Alaska and nationally, with a shortage of pilots entering the industry. Another concern, noted by surveyed lessees, is an increase in fuel cost. Trends in late 2017-2018 observed an increase in fuel cost. Lastly, many leaseholders were optimistic about increases in the level of tourism and cargo transport.

“Currently the airport is in fairly good condition, but it is an aging infrastructure and we’re seeing more maintenance difficulties with the runway, especially in the springtime, with soft areas and heaving.”

Conclusions

Because there is so little road infrastructure in rural Alaska, groceries, household goods, and even construction materials are sometimes transported by plane. Alaska aviation companies support a variety of local industries such as fresh and live seafood markets, sightseeing flights and general tourism, and many others. ANC also has an important role in the air cargo industry as a convenient refueling stop between Asia and the Americas. A few key statistics from 2017 are listed below:

- ▶ The aviation industry in Alaska supported more than **35,000 jobs statewide**. This represents a decrease from 2007, but remains at **7.8% of total state employment**. The aviation industry contributed more than **\$3.8 billion** to the state economy in 2017.
- ▶ Aviation activity at ANC supported about **15,500 jobs**. These on-site jobs represent more than **10 percent** of the total employment in Anchorage, or **1 in 10 jobs**.
- ▶ Aviation activity at FAI supported about **4,300 jobs**. These on-site jobs represent more than **11 percent** of the total employment in Fairbanks North Star Borough, or **1 in 9 jobs**.
- ▶ In 2017, AIP funding in Alaska contributed a total of **\$222.5 million** and nearly **2,600 jobs**.
- ▶ Compared to other economic sectors in Alaska, **the aviation industry would be the 6th largest** in the state, ahead of Construction and Manufacturing, Trade, and Hospitality and Leisure.

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Alaska Department
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Study Elements

Report 1

Rural Airport System:

Public Airports

Private Airports

Report 2

Ted Stevens Anchorage International
Airport (ANC)

Fairbanks International Airport (FAI)

Lake Hood Seaplane Base (LHD)

3 Brochures

Rural Airport
System

Ted Stevens
Anchorage
International
Airport

Fairbanks
International
Airport

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