



2020 Colorado Aviation Economic Impact Study

EXECUTIVE SUMMARY



COLORADO
Department of Transportation
Division of Aeronautics

Acknowledgements

The 2020 Colorado Aviation System Plan (CASP) and Colorado Aviation Economic Impact Study (CEIS) would not have been possible without meaningful collaboration and dedication from representatives of Colorado's aviation community. The participants' time, efforts, and input will undoubtedly shape the future of the Centennial State's aviation system.

Special Thanks To:

Project Advisory Committee (PAC) Members

- Kathleen Collins, CDOT Statewide Planning
- Jeannette Hilaire, Denver International Airport
- Jason Licon, Colorado Airport Operators Association, Northern Colorado Regional Airport
- Kenneth Maenpa, Colorado Aeronautical Board, Telluride Regional Airport
- Chic Myers, Colorado Aeronautical Board
- John Sweeney, FAA Denver ADO

Colorado Aeronautical Board (CAB) Members

- Robert Olislagers, Chair
- Kenneth Maenpa, Vice Chair
- Chic Myers, Secretary
- Ann Beardall
- Kent Holsinger
- Amy Miller
- Joe Rice

Colorado Department of Transportation (CDOT) Division of Aeronautics Team

- David Ulane, Director
- Scott Storie, Project Manager
- Todd Green
- Tonya Hill
- Kip McClain
- Shahn Sederberg
- Bryce Shuck
- Kaitlyn Westendorf



CDOT Division of Aeronautics

5126 Front Range Parkway
Watkins, CO 80137
P: (303)512-5250
colorado-aeronautics.org

Prepared by

Kimley»Horn

in association with EBP US and
KRAMER aerotek

Introduction

The Colorado Department of Transportation (CDOT) Division of Aeronautics undertook the 2020 Colorado Aviation Economic Impact Study (CEIS) to calculate and document the quantitative contributions of aviation to the state. Based on 2018 data, the 2020 CEIS results demonstrate the significant economic impact the state’s airport system has on each airport community as well as the statewide economy. The 2020 CEIS and its companion, the 2020 Colorado Aviation System Plan (CASP), both included research and documentation of the qualitative impacts and stories of how airports contribute to the state and its residents beyond the quantitative analysis.

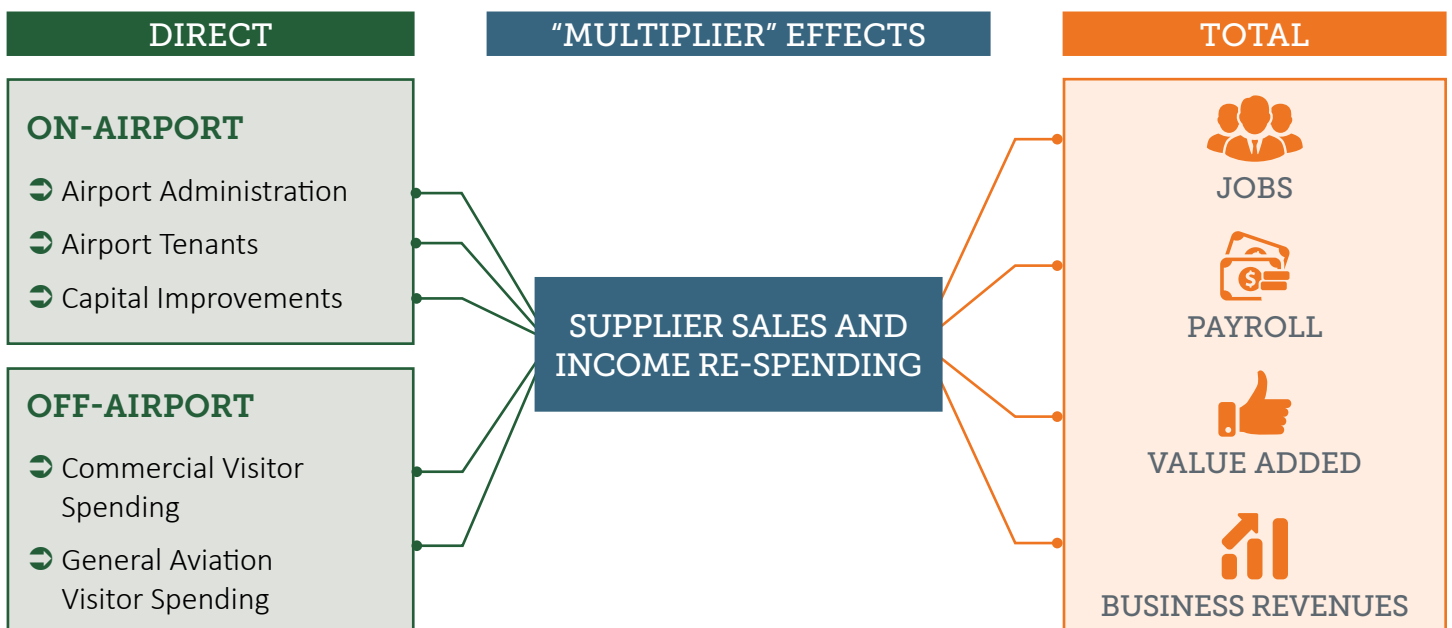
While there are over 400 airport facilities in Colorado, only the 74 public-use facilities were considered for inclusion in the 2020 CEIS. Four of the privately-owned, public-use airports were not included as they either declined participation or did not respond to survey requests. As such, the 2020 CEIS consists of 70 public-use airports which includes 65 publicly-owned and 5 privately-owned airports.

These 70 airports in Colorado’s public-use airport system support and contribute to the state and regional economies of Colorado. The airports themselves play a vital role in the state’s transportation system by providing both commercial airline and general aviation (GA) service within the state, throughout the U.S., and across the globe. They are also important job centers and gateways for out-of-state visitors to reach all corners of the state. Together, the operation of airports (including airport administration, airport tenants, and capital improvements) and visitor spending from those using both commercial airline service and GA aircraft contribute to the state’s economy.

Methodology

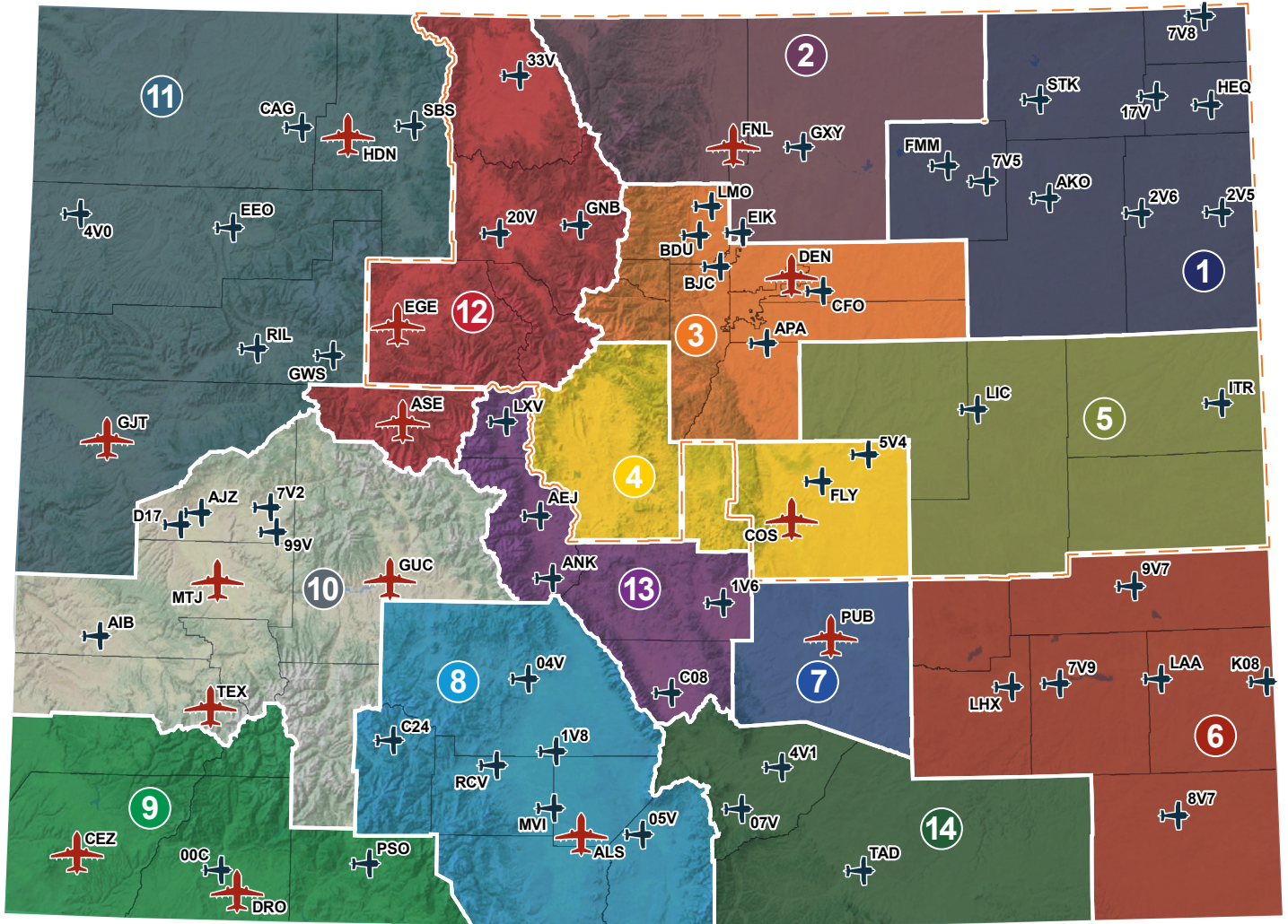
Direct and multiplier impacts are the basis of economic impact measurement. An airport’s direct impact is generated from financial data associated with airport administration, on-airport tenants, and capital improvement spending. Additional off-airport impacts were also quantified which included commercial service and GA visitor spending. Direct data was gathered through various surveys as well as IMPLAN, an economic modeling software that utilizes data from a variety of federal sources to calculate economic impacts.

Multiplier impacts, referred to as supplier sales and income re-spending in the 2020 CEIS, were applied once the direct impacts were finalized. Supplier sales are portions of direct revenues used to purchase goods and services from Colorado businesses. Income re-spending reflects income earned by workers from direct and supplier sales transactions that are then spent in Colorado. As shown in the illustration below, when the total economic impacts are presented, they represent the summation of the direct, supplier sales, and income re-spending effects for the state.



OEDIT Regions

The 14 regions of Colorado's Office of Economic Development and International Trade (OEDIT) agency were used for the 2020 CEIS in the regional analysis. Supplier sales and income re-spending were modeled at both a regional and statewide scale to allow for presentations of regional and statewide impacts for each airport, as well as statewide impacts for the Colorado airport system. In addition to the 14 OEDIT regions, a special Denver International Airport (DEN) catchment area or region was developed. DEN's impacts go far beyond the borders of OEDIT Region 3 as many travelers and businesses utilize DEN for airline travel, cargo activity, and other services. The supplier sales and income re-spending also occurs in a larger context. This region was developed in concert with DEN.



OEDIT Regions

Commercial Service

General Aviation

1 Golden Plains Region	6 Southeast Colorado Region	11 Northwest Colorado Region
2 Northern Colorado Region	7 Pueblo Region	12 Rocky Mountain Resort Region
3 Denver Region	8 San Luis Valley Region	13 Upper Arkansas Region
4 Pikes Peak Region	9 Southwest Region	14 Raton Basin Region
5 Central Plains Region	10 Central Western Slope Region	DEN Catchment Area

Economic Impact Measures

The economic impacts of each airport are defined using the following economic measures:



Jobs: Jobs are the total number of persons employed, regardless of whether they are full time or part time.



Payroll: Payroll is defined as total employment compensation, including wages and other benefits (e.g. health care insurance payments, retirement contributions, etc.). This is also known as “labor income” or “total compensation”.



Value Added: Value added measures the economic productivity of each aviation-related business establishment, calculated as business revenues earned minus the costs of purchasing goods and services from other businesses. Value added reflects a company’s or industry’s contribution to Colorado’s Gross Regional (or State) Product (a local concept synonymous with Gross Domestic Product). It includes all labor compensation, profits, and business taxes paid.



Business Revenues: Business revenues incorporate expenditures needed to administer airports, sales of goods and services by airport tenants, budget expenditures by public sector agencies located on airports, the cost of capital expenditures, and visitor spending in Colorado’s hospitality-related sectors. This is also commonly referred to as business “output” or sales or even “economic activity or impact.”

Economic Impact of Aviation in Colorado

Based on the findings of the 2020 CEIS, Colorado’s airports support approximately eight percent of the state economy. The combined economic contribution of on-airport activity, visitor spending, and off-airport cargo reflects the total economic activity generated on airport property, as well as the multiplier effects of supplier purchases and income re-spending throughout the state. As shown below, Colorado airports provide nearly 346,000 jobs and generate over \$16.2 billion in payroll, \$27.0 billion in value added, and \$48.6 billion in business revenues. Economic impacts by type is represented on the following pages.



JOBS

345,661



PAYROLL

\$16.2 BILLION



VALUE ADDED

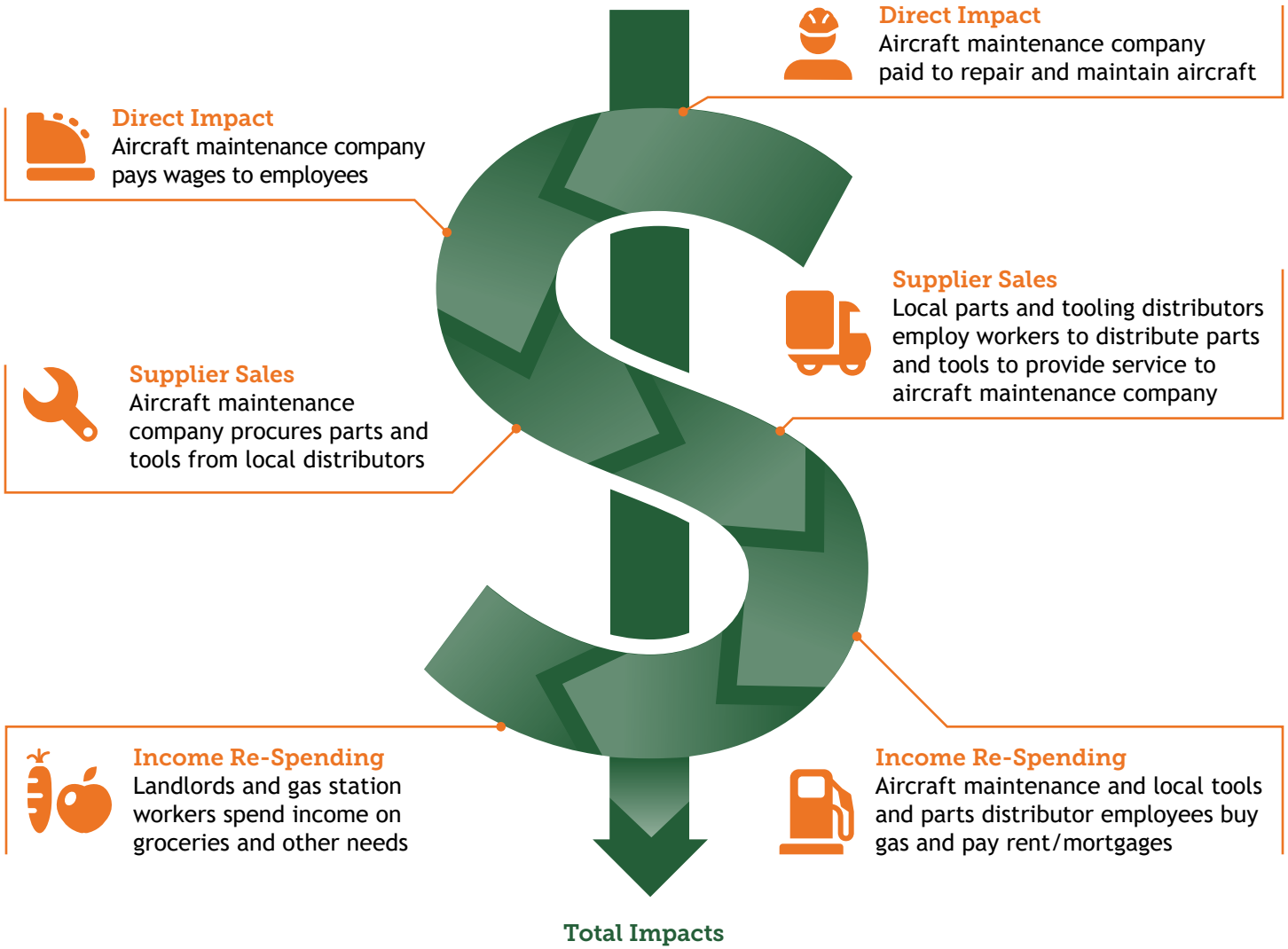
\$27.0 BILLION



BUSINESS REVENUES

\$48.6 BILLION

Economic Impact Calculation Process



Jobs



Payroll



Value Added



Business Revenues

Economic Impacts of On-Airport Activities

(Administration, Tenants, Capital Improvements)

On-airport activities were classified into three main service categories: Airport Administration (airport operations and management), Airport Tenants (airlines, fixed based operators [FBOs], terminal concessions, cargo carriers, etc.), and Capital Improvements such as airport infrastructure improvements and tenant construction. On-airport activity at Colorado airports generated nearly \$24 billion in business revenues which supported more than 133,000 jobs with an average compensation of \$61,000 per worker.



133,240

\$8.1 Billion

\$13.2 Billion

\$24.0 Billion

Jobs

Payroll

Value Added

Business Revenues

Economic Impacts of Off-Airport Activities

(Visitor Spending)

Airports in Colorado function as gateways for out-of-state visitors who travel to Colorado for personal and business reasons, both domestic and international. These visitors use both commercial service and GA airports to arrive at their destinations and typically spend money on accommodations, food and beverage, local ground transportation, retail, and entertainment. For this study, visitor spending accounts specifically for out-of-state commercial service or GA visitors who are visiting Colorado for personal or business reasons. In 2018, out-of-state commercial service and GA visitors spent more than \$20 billion in the Colorado economy, which ultimately supported nearly 200,000 jobs.



197,861

Jobs

\$6.9 Billion

Payroll

\$11.7 Billion

Value Added

\$20.2 Billion

Business Revenues



Photo courtesy of Rick Lamport, Gunnison-Crested Butte Regional Airport (GUC)

In September 2014, the ski resort town of Crested Butte and Anheuser-Busch hosted the Bud Light “Whatever, USA” event on the town’s main street. The event was part of a marketing campaign and brought more than 1,000 visitors and \$2 million in economic activity to the town during a traditionally quiet time of year. Crested Butte relied heavily on GUC, located 23 miles south of the town, to bring guests to the event. The airport was instrumental to success as it processed more than 1,700 passengers in just four hours on the first day. Anheuser-Busch chartered five commercial aircraft including three specially-painted CRJ-200 aircraft to fly in people from around the country to attend the bash. Anheuser-Busch cited the airport as one of the reasons why Crested Butte was chosen to host the festivities, as GUC provided the capabilities of a large airport without a long drive needed to reach the rural town.

Economic Impacts of Off-Airport Cargo

Beyond creating impacts of their own as a matter of their operations, Colorado airports play an additional critical role in the state economy by enabling manufacturers and agricultural producers to transport commodities and finished goods to customers located in both long-distance domestic and international markets. The economic impact of air cargo quantifies the off-airport activities that are supported by air cargo service at airports. The total contribution of air cargo to the state economy is 14,560 jobs and nearly \$4.4 billion in business revenues.



14,560

Jobs

\$1.2 Billion

Payroll

\$2.2 Billion

Value Added

\$4.4 Billion

Business Revenues



Photo courtesy of CDOT Division of Aeronautics

Aviation's Contributions to COVID-19 Pandemic Response

In March 2020, during the first weeks of the novel coronavirus (COVID-19) pandemic, medical supplies and personal protective equipment (PPE) became scarce in many rural areas in Colorado. Luckily, the Governor's office and the Colorado Hospital Association organized an emergency medical supply distribution network to address critical shortages. As part of this network, 115 pilots volunteered on behalf of Angel Flight West (AFW) to deliver much needed cargo to rural hospitals. Additionally, volunteers formed the Make4Covid Colorado community, which has designed, manufactured and tested medical and protective equipment for hospital usage. During a two-week time frame in March and April 2020, AFW's Colorado Wing flew medical cargo missions to Limon, Holyoke, Wray, Alamosa, Cortez, Grand Junction, and Rangely. Several local airports and FBOs supported AFW's missions, often waiving facility and ramp fees and discounting fuel prices. AFW has existed since 1983 as a nonprofit, volunteer-driven, organization that, prior to the pandemic, arranged free, non-emergency air travel for children and adults with serious medical conditions in 13 western states.

Economic Impacts of Agricultural Sector

Aerial applicators generate significant economic activity in Colorado. They not only protect crop value by preventing surface disruption, but also support the state’s agricultural sector and a variety of other industries by purchasing supplies and paying wages that are spent at businesses throughout the state. The variety of industries supported by supplier sales and income re-spending within Colorado demonstrates the extensive reach of Colorado’s aerial application industry. The total contribution of aerial application to the Colorado state economy—including jobs associated with aerial-treated crops and jobs in aerial application—amounts to nearly \$873 million in annual business revenues and 5,140 jobs.



5,140

Jobs

\$216.6 Million

Payroll

\$345.6 Million

Value Added

\$872.8 Million

Business Revenues

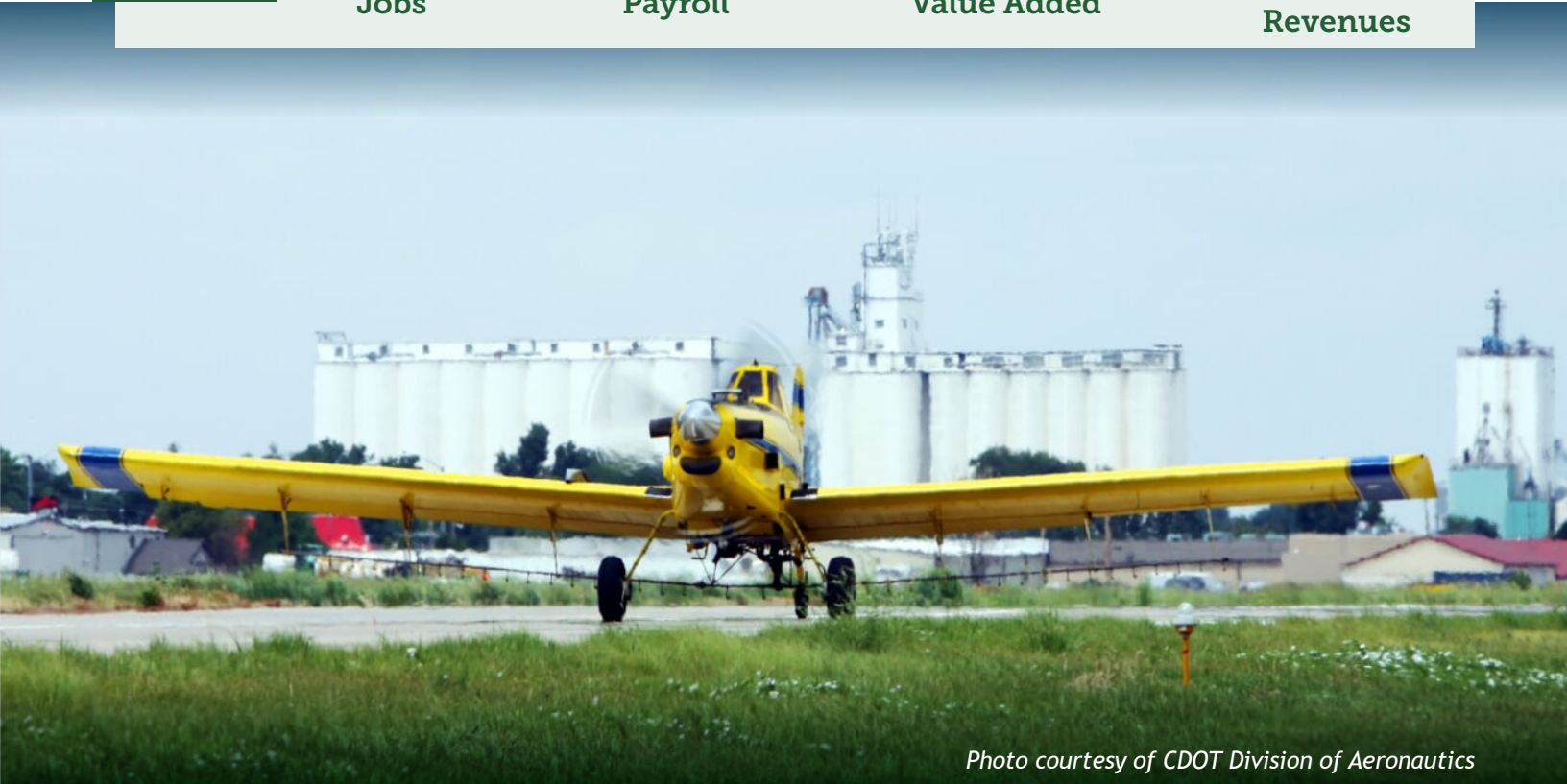


Photo courtesy of CDOT Division of Aeronautics

Aviation’s Impact on Agriculture in Colorado

In 2018, agricultural crops in Colorado generated \$7.5 billion in revenue from approximately 4.6 million acres of harvested land. The state’s major crops include corn, wheat, alfalfa, potatoes, and oats as well as several specialty crops such as melons, sweet corn, and peaches. Aerial applicators play a significant role in Colorado’s agriculture industry as they perform a variety of tasks including seeding crops, planting cover crops, feeding and fertilizing, disease control, public health spraying, and weed mitigation. Twenty-six airports in Colorado reported having some level of aerial application, with the highest levels of activities occurring on the eastern plains and in the San Luis Valley. Additionally, several airports around the state, including DEN, have active farming operations onsite. In 2018, aerial applicators treated an estimated 1.29 million acres of crop land in Colorado, nearly 30 percent of the state’s total harvested land.

Individual Airport Economic Impacts (Statewide)

Associated City	Airport Name	FAA ID	Jobs	Payroll	Value Added	Business Revenue
OEDIT Region 1: Golden Plains						
Akron	Colorado Plains Regional	AKO	102	\$5,399,000	\$8,655,000	\$15,090,000
Brush	Brush Municipal	7V5	4	\$236,000	\$552,000	\$800,000
Fort Morgan	Fort Morgan Municipal	FMM	44	\$1,932,000	\$2,939,000	\$5,077,000
Haxtun	Haxtun Municipal	17V	5	\$7,000	\$15,000	\$22,000
Holyoke	Holyoke	HEQ	34	\$1,818,000	\$2,473,000	\$3,901,000
Julesburg	Julesburg Municipal	7V8	4	\$111,000	\$122,000	\$179,000
Sterling	Sterling Municipal	STK	17	\$916,000	\$1,409,000	\$2,349,000
Wray	Wray Municipal	2V5	35	\$1,858,000	\$2,558,000	\$3,745,000
Yuma	Yuma Municipal	2V6	49	\$2,557,000	\$3,411,000	\$5,375,000
OEDIT Region 1 Total Impacts			294	\$14,834,000	\$22,134,000	\$36,538,000
OEDIT Region 2: Northern Colorado						
Erie	Erie Municipal	EIK	214	\$11,231,000	\$18,087,000	\$35,925,000
Fort Collins/ Loveland	Northern Colorado Regional	FNL	1,072	\$51,914,000	\$83,188,000	\$160,874,000
Greeley	Greeley-Weld County	GXY	926	\$42,392,000	\$67,373,000	\$125,132,000
OEDIT Region 2 Total Impacts			2,212	\$105,537,000	\$168,648,000	\$321,931,000
OEDIT Region 3: Denver Region						
Boulder	Boulder Municipal	BDU	299	\$16,766,000	\$26,276,000	\$54,732,000
Denver	Centennial	APA	10,341	\$593,537,000	\$974,495,000	\$2,087,182,000
Denver	Rocky Mountain Metropolitan	BJC	915	\$46,371,000	\$69,043,000	\$116,428,000
Denver	Colorado Air and Space Port	CFO	3,312	\$193,442,000	\$312,144,000	\$730,848,000
Longmont	Vance Brand	LMO	490	\$24,097,000	\$36,439,000	\$68,036,000
OEDIT Region 3 Total Impacts			15,357	\$874,213,000	\$1,418,397,000	\$3,057,226,000
DEN Special Region Impacts						
Denver	Denver International	DEN	259,084	\$11,110,914,000	\$18,724,455,000	\$33,509,152,000
DEN Special Region Total Impacts			259,084	\$11,110,914,000	\$18,724,455,000	\$33,509,152,000
OEDIT Region 4: Pikes Peak						
Calhan	Calhan	5V4	5	\$221,000	\$330,000	\$1,022,000
Colorado Springs	City of Colorado Springs Municipal	COS	25,093	\$1,523,173,000	\$2,359,205,000	\$3,426,931,000
Colorado Springs	Meadow Lake	FLY	273	\$13,442,000	\$20,865,000	\$45,010,000
OEDIT Region 4 Total Impacts			25,371	1,536,836,000	2,380,400,000	3,472,963,000
OEDIT Region 5: Central Plains						
Burlington	Kit Carson County	ITR	32	\$1,428,000	\$2,203,000	\$3,469,000
Limon	Limon Municipal	LIC	11	\$491,000	\$750,000	\$1,263,000
OEDIT Region 5 Total Impacts			43	\$1,919,000	\$2,953,000	\$4,732,000
OEDIT Region 6: Southeast Colorado						
Eads	Eads Municipal	9V7	13	\$359,000	\$445,000	\$601,000
Holly	Holly	K08	5	\$72,000	\$95,000	\$145,000
La Junta	La Junta Municipal	LHX	65	\$2,912,000	\$4,716,000	\$10,388,000
Lamar	Lamar Municipal	LAA	22	\$1,307,000	\$1,780,000	\$3,077,000
Las Animas	City of Las Animas-Bent County	7V9	6	\$211,000	\$241,000	\$450,000
Springfield	Springfield Municipal	8V7	6	\$112,000	\$153,000	\$245,000
OEDIT Region 6 Total Impacts			117	\$4,973,000	\$7,430,000	\$14,906,000
OEDIT Region 7: Pueblo						
Pueblo	Pueblo Memorial	PUB	775	\$38,661,000	\$55,209,000	\$103,708,000
OEDIT Region 7 Total Impacts			775	\$38,661,000	\$55,209,000	\$103,708,000
OEDIT Region 8: San Luis Valley						
Alamosa	San Luis Valley Regional/Bergman Field	ALS	229	\$10,794,000	\$17,531,000	\$35,298,000
Blanca	Blanca	05V	4	\$27,000	\$37,000	\$68,000

Associated City	Airport Name	FAA ID	Jobs	Payroll	Value Added	Business Revenue
Center	Leach	1V8	6	\$181,000	\$240,000	\$432,000
Creede	Mineral County Memorial	C24	7	\$325,000	\$510,000	\$1,094,000
Del Norte	Astronaut Kent Rominger	RCV	31	\$1,361,000	\$2,440,000	\$5,383,000
Monte Vista	Monte Vista Municipal	MVI	10	\$449,000	\$600,000	\$1,054,000
Saguache	Saguache Municipal	04V	3	\$21,000	\$27,000	\$48,000
OEDIT Region 8 Total Impacts			290	\$13,158,000	\$21,385,000	\$43,377,000
OEDIT Region 9: San Luis Valley						
Cortez	Cortez Municipal	CEZ	111	\$5,905,000	\$8,639,000	\$14,619,000
Durango	Animas Airpark	00C	39	\$2,756,000	\$4,006,000	\$7,874,000
Durango	Durango-La Plata County	DRO	2,707	\$107,011,000	\$173,791,000	\$293,694,000
Pagosa Springs	Stevens Field	PSO	42	\$2,998,000	\$4,007,000	\$6,629,000
OEDIT Region 9 Total Impacts			2,899	\$118,670,000	\$190,443,000	\$322,816,000
OEDIT Region 10: Central Western Slope						
Crawford	Crawford	99V	20	\$1,286,000	\$1,485,000	\$2,655,000
Delta	Blake Field	AJZ	48	\$2,861,000	\$3,912,000	\$6,939,000
Delta	Westwinds	D17	11	\$708,000	\$930,000	\$1,671,000
Gunnison	Gunnison-Crested Butte Regional	GUC	1,054	\$44,857,000	\$71,083,000	\$121,878,000
Montrose	Montrose Regional	MTJ	2,850	\$111,356,000	\$188,900,000	\$327,264,000
Nucla	Hopkins Field	AIB	29	\$1,565,000	\$2,060,000	\$3,815,000
Paonia	North Fork Valley	7V2	4	\$239,000	\$345,000	\$586,000
Telluride	Telluride Regional	TEX	414	\$18,270,000	\$28,523,000	\$51,884,000
OEDIT Region 10 Total Impacts			4,430	\$181,142,000	\$297,238,000	\$516,692,000
OEDIT Region 11: Northwest Colorado						
Craig	Craig-Moffat	CAG	50	\$2,411,000	\$4,263,000	\$8,103,000
Glenwood Springs	Glenwood Springs Municipal	GWS	202	\$10,029,000	\$18,338,000	\$36,674,000
Grand Junction	Grand Junction Regional	GJT	3,399	\$189,721,000	\$312,318,000	\$710,960,000
Hayden	Yampa Valley	HDN	2,724	\$111,500,000	\$181,887,000	\$311,882,000
Meeker	Meeker/Coulter Field	EEO	19	\$889,000	\$1,411,000	\$2,473,000
Rangely	Rangely	4V0	34	\$1,651,000	\$2,528,000	\$4,440,000
Rifle	Rifle Garfield County	RIL	277	\$16,348,000	\$23,654,000	\$40,945,000
Steamboat Springs	Steamboat Springs/Bob Adams Field	SBS	184	\$9,021,000	\$14,029,000	\$26,113,000
OEDIT Region 11 Total Impacts			6,889	\$341,570,000	\$558,428,000	\$1,141,590,000
OEDIT Region 12: Rocky Mountain Resort						
Aspen	Aspen-Pitkin County/Sardy Field	ASE	7,886	\$363,569,000	\$603,899,000	\$988,982,000
Eagle	Eagle County Regional	EGE	5,147	\$237,607,000	\$388,976,000	\$642,042,000
Granby	Granby-Grand County	GNB	10	\$451,000	\$678,000	\$1,214,000
Kremmling	Mc Elroy Airfield	20V	16	\$750,000	\$1,211,000	\$2,151,000
Walden	Walden-Jackson County	33V	7	\$48,000	\$70,000	\$119,000
OEDIT Region 12 Total Impacts			13,066	\$602,425,000	\$994,834,000	\$1,634,508,000
OEDIT Region 13 Upper Arkansas						
Buena Vista	Central Colorado Regional	AEJ	90	\$4,212,000	\$6,983,000	\$14,853,000
Cañon City	Fremont County	1V6	51	\$2,729,000	\$3,967,000	\$8,288,000
Leadville	Lake County	LXV	29	\$1,463,000	\$2,227,000	\$4,286,000
Salida	Harriet Alexander Field	ANK	44	\$2,068,000	\$3,278,000	\$6,937,000
Westcliffe	Silver West	C08	5	\$60,000	\$99,000	\$188,000
OEDIT Region 13 Total Impacts			219	\$10,532,000	\$16,554,000	\$34,552,000
OEDIT Region 14 Raton Basin						
La Veta	Cuchara Valley at La Veta	07V	3	\$4,000	\$4,000	\$10,000
Trinidad	Perry Stokes	TAD	36	\$1,789,000	\$2,563,000	\$4,772,000
Walsenburg	Spanish Peaks Airfield	4V1	8	\$308,000	\$459,000	\$848,000
OEDIT Region 14 Total Impacts			47	\$2,101,000	\$3,026,000	\$5,630,000
Total System-Wide Impacts*			345,661	\$16.2 Billion	\$27.0 Billion	\$48.6 Billion

* The economic impacts of off-airport cargo activities were completed on a statewide level and are not included in regional economic impact totals.

Did You Know?



32,946,058

Passengers enplaned at
14 commercial service airports in 2018



750,493

Commercial Service
operations in 2018



1,537,900

General Aviation operations at
70 public-use airports across Colorado in 2018



5th Busiest
airport in the U.S.

DEN is the 5th busiest airport in the
U.S. in terms of passenger enplanements¹

1. Source: FAA (2019) CY 2018 Passenger
Boarding Data

1st

Remote air traffic control
tower with radar/track-based
input overlay in the U.S.

Northern Colorado Regional (FNL) is the
home to the Colorado Remote Tower
Project, the first remote tower of its kind
that is currently undergoing testing and
should be fully operational by 2022.



\$9.11 Billion

The total needs of the Colorado airport system as determined by the 2020 CASP, were over \$9 billion for the 20-year planning window. The CASP analyzed the existing condition of the airport system and determined possible areas of improvement over the 20-year horizon based on goals, performance measures, and objectives developed in collaboration with the Project Advisory Committee (PAC). Based on the 2018 total statewide economic impact, an investment in the airport system based on all CASP recommendations would provide a return-on-investment of 433%. The combination of the CASP and CEIS highlight the importance of the Colorado airport system and investing in the system's future.

To read the complete technical report please visit the 2020 CASP and CEIS project website:

coloradoaviationsystem.com



COLORADO
Department of Transportation
Division of Aeronautics

5126 Front Range Parkway
Watkins, CO 80137
(303)512-5250
colorado-aeronautics.org