Wyoming

2020 WYDOT AVIATION ECONOMIC IMPACT STUDY

TECHNICAL REPORT

WYOMING TRANSPORTATION DEPARTMENT

2020 WYOMING AVIATION ECONOMIC IMPACT STUDY

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As required by Paragraph 425.B(4) of FAA Order 5100.38C, *Airport Improvement Program (AIP) Handbook*:

The preparation of this document may have been supported, in part, through the Airport Improvement Program financial assistance from the Federal Aviation Administration as provided under Title 49 U.S.C., Section 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.

All data presented in this report were collected prior to onset of the COVID-19 pandemic in March 2020; statewide and airport specific economic impacts documented in this report reflect pre-COVID conditions.

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1. Introduction and Summary of Findings

In the summer of 2019, the Aeronautics Division of the Wyoming Department of Transportation (WYDOT) initiated a comprehensive study to determine the annual economic impact for 34 public general aviation and commercial service airports in Wyoming. All public airports included in the study have a paved runway. The study was conducted in two phases. Phase I, which was completed primarily in the spring and summer of 2019, focused on gathering information from visitors to Wyoming arriving on either general aviation aircraft or on scheduled commercial airline flights. Phase II of the study started in the fall of 2019 and included additional data collection and analysis to provide both statewide and airport-specific estimates of annual economic impact.

Economic impact studies, such as this, reflect a snapshot in time; impacts reflect airport activity and economic conditions at the time data collection took place. As this study was being prepared, the global COVID-19 pandemic started. By late March 2020, the pandemic significantly reduced air travel demand. It is important to note that all data gathering for this study was completed prior to the major onset of the pandemic in the U.S. Therefore, economic impacts both statewide and airport-specific, as presented in this document, reflect pre-COVID conditions.

COVID subsequently impacted business and leisure travel for all U.S. airports. As part of this study, an economic impact calculator was developed. The calculator enables WYDOT to determine, for any specific airport, how its economic impacts may have changed from the baseline economic impacts documented in this report. More information on the economic impact calculator is presented later in this report or can be obtained from WYDOT.

The 34 commercial and general aviation airports analyzed in this report are referred to as "study airports." Study airports are shown in **Figure 1-1**. Wyoming's State Aviation System Plan classifies airports as Commercial, Business, Intermediate, and Local. The state role for each study airport is reflected on **Figure 1-1**. These classifications help to determine facilities and services that are desirable to help each airport best fulfill its role in the state airport system, enabling each airport to meet the needs of its customers and to serve each local community.

Figure 1-1: Wyoming Airport System

Source: WYDOT, Jviation

Airports throughout the state are important catalysts for attracting and retaining economic development, and there are notable economic impacts that flow from the airport themselves. As this study demonstrates, the day-to-day operation of Wyoming's commercial and general aviation airports results in $2 billion in annual economic impact. Primary study objectives for the 2020 Aviation Economic Impact Study follow:

- Determine the annual economic impacts that the state economy realizes from the day-to-day operation of the commercial and general aviation study airports.
- Determine the annual economic impact realized as a result of aviation-related business tenants located at the study airports.
- Determine the annual economic impacts resulting from average annual capital investment at the study airports.
- Determine the economic impacts from the expenditures from visitors who come to Wyoming on general aviation aircraft using all study airports.
- Determine the economic impacts from the expenditures of visitors who arrive on scheduled commercial airline flights at the nine commercial service airports.

- Determine annual state and local sales tax revenues supported by direct economic impacts supported by study airports.
- Determine the annual economic impacts associated with the commercial airline function at the nine commercial service study airports.
- Determine how activities associated with unmanned aerial systems (UAS) generate benefits in Wyoming.
- Determine how various agencies, organizations, and others rely on and benefit from study airports.

The study included various research activities to establish linkages between the airports and various facets of the state's economy; research included:

- **Surveys of airport managers and airport business tenants –** a significant portion of each airport's annual economic impact is associated with the day-to-day operation of the airport and with activities that on-airport aviation-related businesses provide to support aircraft, aircraft operations, and airport customers. Surveys, phone interviews, and on-site visits were used to collect important management and tenant information that serves as essential input for the economic impact analysis. Airport managers/sponsors for the 34 study airports were surveyed and interviewed and most were visited; the 146 different tenants at the study airports were also surveyed many were interviewed during on-site airport visits.
- **Surveys of travelers using general aviation airports** – study airports and/or fixed base operators (FBOs) in Wyoming supported the study by distributing surveys to passengers flying to and within Wyoming on general aviation aircraft. During the summer of 2019, an intern from the University of Wyoming also conducted visitor intercept surveys. A total of almost 1,200 general aviation visitor surveys were collected in conjunction with the study.
- **Surveys of travelers using schedule commercial airline flights** –commercial airports in Wyoming also assisted with distributing surveys to visitors using commercial airline flights. Most commercial airports provided online survey access, and some airports provided supplemental hard copy surveys to their departing commercial visitors. Over 26,850 surveys were completed by visitors to Wyoming who traveled on commercial airlines. Completed surveys provide insight on airport/aviation uses and benefits and on visitor-related expenditures in Wyoming.
- **Case studies** – aerial applicators, emergency medical service (EMS) providers, hospitals, and aerial firefighters, rely on the study airports. To document how and why these groups use the Wyoming airports, separate case studies were conducted. The case studies were supported by surveys and interviews.
- **Surveys of state, regional, and local organizations and associations** – there are numerous state, regional, and local agencies and organizations that rely on study airports. Over 100 different agencies were contacted by mail and email to secure information on how they rely on aviation to support their activities. Organizations contacted represent a broad spectrum from economic development groups, to organizations involved in tourism, to those charged with various aspects of law enforcement, to those who help protect the environment. Agencies helped to document which types of activities are supported by aviation and which airports in the state are used most frequently by agency respondents.

Results from these various research and outreach efforts are discussed and documented in subsequent sections of this report.

Highlights from Wyoming's 2020 Aviation Economic Impact Study include:

- The study airports (publicly owned with paved runways) include nine commercial service and 25 general aviation airports. The study airports support total employment estimated at **21,974**; and these employees have an associated annual payroll of over **$941 million**.
- The study airports support annual economic activity of approximately **$2 billion**.
- Direct activities supported by the study airports contribute approximately **$87.7 million** in annual state and local sales tax revenues.
- There are an estimated **5,600** additional non-aviation jobs in Wyoming that have improved efficiency from using airports, whether that be general aviation, scheduled commercial airlines, or air shipping services. These jobs are in addition to the 21,974 jobs that are supported by direct and indirect/induced airport activities.

More detail on these and other impacts, associated with the 34 study airports, is found in subsequent sections of this report. In addition to impacts that can be quantified numerically, the study also identified other ways that the airports in Wyoming support the state's residents, businesses, and visitors. Additional activities that study airports support include:

- Business – hundreds of non-aviation businesses in Wyoming rely on airports to improve their efficiency, transporting staff members, expanding their market areas, and receiving just-in-time supplies to support their logistics and supply chain management activities. Customers and suppliers of Wyoming-based businesses also reduce their travel time when visiting the state by relying on general aviation and scheduled commercial flights.
- Tourism – about 718,510 visitors arrive in Wyoming each year by air. These visitors arrive on general aviation aircraft and on commercial airline flights. Resorts, hotels, guides, recreational areas, retail shops, camps, ranches, restaurants, and entertainment venues all benefit from expenditures made by these air visitors while they are in Wyoming.
- Agriculture and Forestry – over 30 million acres in Wyoming are devoted to agriculture and almost 12 million acres to forestry. Aerial applicators who rely on Wyoming airports are essential to the prosperity of both of these important Wyoming industries.
- Aerial Firefighting – Wyoming averages about 600 wildfires a year; aerial firefighting, supported by the study airports, is essential to protecting people, property, and the environment.
- Emergency Medical Services (EMS) – many areas of Wyoming are remote and not easily accessible by road, and there are many smaller communities that lack local medical facilities that are equipped to treat patients who need care for trauma/injuries, strokes, heart attacks, neonatal, or other life threatening conditions. Airlift services provided by EMS operators from accident sites and from smaller clinics to larger hospitals is a life-saving service supported by study airports.
- Hospitals – rural hospitals and clinics throughout the U.S. are at risk, and this includes medical facilities throughout Wyoming. It takes a population base of about 40,000 – 50,000 to maintain a full cadre of medical specialists on staff. Communities throughout Wyoming rely on doctors who fly to Wyoming communities to consult with patients and perform many types of medical procedures.
- Agencies – there are many state agencies in Wyoming that rely on aerial inspection to protect wildlife and the environment and to enforce the laws of the state and U.S. governments. Over 8 million acres in Wyoming are considered wilderness, aerial search and rescues missions are an example of an agency activity supported by study airports. Other agencies rely on study airports to recruit and retain high quality jobs in Wyoming and to meet their instate travel needs.

- Colleges/Universities – public and private colleges and universities of all sizes rely on study airports to expand their market areas for student recruitment, bring in visiting lecturers, and support their philanthropic activities.

More information on airport-supported activities is presented later in this report. Specific uses and users of Wyoming's airports are also summarized in an Individual Airport Report that was prepared for each study airport. These airport reports are available from the WYDOT Aeronautics Division at the following website: http://www.dot.state.wy.us/home/aeronautics.html

The remainder of Wyoming's 2020 Aviation Economic Impact Study is organized as follows:

- Sources, Measurements, and Process for Estimating Economic Impacts
- Direct Annual Economic Impacts from Study Airports
- Indirect/Induced Annual Economic Impacts from Study Airports
- Total Annual Economic Impacts
- Airport-Supported Tax Revenues
- Economic Impacts from Commercial Airline Functions
- Statewide Estimate of Non-Aviation Jobs Benefiting from Airports
- Economic Activity Associated with UAS Activity
- Case Studies and Agency Use of Airports in Wyoming
- Economic Impact Calculator Overview
- Summary and Conclusions

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2. Sources, Measurements, and Process for Preparing Economic Impact Estimates

2.1 Sources for Airport-Specific and Statewide Economic Impacts

For this statewide study for Wyoming's public commercial service and general aviation airports, economic impacts are established, as applicable, for five impact categories. The study estimated annual economic impacts for each of the following:

- Airport management
- Aviation-related airport business tenants
- Average annual investment related to capital improvements
- Expenditures from visitors arriving on general aviation aircraft
- Expenditures from visitors arriving on commercial airline flights (nine commercial service airports only)

Descriptions of the study's five impact categories follow:

- **Airport Management:** Most public commercial service and general aviation airports support jobs that are associated with daily airport administrative, maintenance, and operational functions. On-airport jobs in the airport management category may be full-time or part-time. Airports also report that they sometimes support jobs that are seasonal in nature.

  Since most study airports are owned/operated by a city or a county, some jobs related to the airport management category are located "off-airport." Full-time or part-time employment related to human resources, accounting, maintenance, grants administration, financial/legal services, and other functions are sometimes located off-airport. An airport's need for these services is often not full-time, and the "airport-associated job" is shared with other city/county departments. Off-airport, airport-related jobs that support airport management are included in this study.

- **Airport Business Tenants:** Many study airports have on-airport business tenants that provide aviation-related services or support to airport customers. Business tenants are defined as revenue-generating companies with associated paid employees who provide aviation-related services. Examples of airport business tenants include fixed base operators (FBOs), aircraft maintenance providers, aerial applicators, commercial airlines, Part 135 air charter operators, flight schools, corporate flight departments, concessionaires, avionics repair shops, aircraft manufacturers, and other similar aviation-related businesses. Military units located at civilian airports are considered aviation-related business tenants in this analysis.

  Only aviation-related businesses are included in the business tenant category. Economic impacts for any non-aviation on-airport businesses and the impacts of most off-airport aviation businesses in Wyoming are not included in the economic impact estimates presented in this report.

- **Capital Investment:** Study airports undertake capital improvement projects for major maintenance, expansion, and facility replacement needs. Projects are most often funded with grants from WYDOT and/or the Federal Aviation Administration (FAA), with airports providing a local match. Some airports generate sufficient revenue to fund development projects without federal or state assistance; commercial airports sometimes fund capital development with funds they collect from a Passenger

Facility Charge (PFC). Third-party/tenant investment, especially for hangar and other development, is also made. The Wyoming Business Council also provides some grants for airport capital projects.

This study considered the average annual capital investment for a five-year (2015-2019) period to estimate the economic impact resulting from average annual capital investment at the study airports. A multi-year historic funding period is considered since some large capital projects take several years to fully implement; and in other cases, airports have to accumulate entitlement funding over several years in order to accomplish some projects. Considering average annual capital investment over a multi-year period helps to capture the full economic benefit from investments made at the study airports.

Unlike the other economic impact categories analyzed in this study, economic impacts in this category (employment, payroll associated with the employment, spending, and annual economic activity) occur only when investment, associated with the project(s), is actually taking place. Once project-related spending is over, economic impacts associated with the capital investment are suspended. However, to capture all economic impacts supported by the Wyoming airports, it is important to consider the impacts associated with the category.

Since economic impact studies reflect economic conditions that are a snapshot in time, economic impacts in this category have the propensity to change, increasing or decreasing, perhaps even significantly, between reporting periods. Economic impacts in the capital investment category are not on-going. Impacts in this category change year-to-year, unless capital investment is constant and at the same level each year. This is seldom the case since the need for capital improvement projects and associated investment changes annually. To fully report on all economic impacts associated with the study airports, impacts associated with average annual capital investment is one of the five impact categories considered in this analysis.

- **Expenditures by Visitors Arriving on General Aviation Aircraft:** Throughout the year, both commercial service and general aviation airports accommodate varying numbers of visitors who fly to Wyoming on general aviation aircraft. General aviation visitors may arrive one person at a time, or they may arrive in larger groups on chartered planes. Visiting general aviation aircraft can range in size from aircraft that carry two people, to large aircraft that carry over 100 passengers. Flights on carriers such as NetJets, FlexJet, and Wheels Up also fall into the general aviation category. Some general aviation visitors, especially those who are traveling for business, rely on general aviation because it enables them to shorten the duration of their trip. Other visitors choose general aviation because it enables them to fly directly to a destination not served by scheduled commercial airline flights.

  Frequently, general aviation visitors arrive and depart on the same day, limiting their expenditures. Other general aviation visitors stay for one or more days; these overnight general aviation visitors have a greater economic impact. Overnight visitors often have expenditures for lodging, food, retail purchases, entertainment, and local ground transportation; the longer the visitor stays, typically, the greater the amount they spend. Visitor expenditures help to support employment and associated payroll for service, hospitality, recreational, entertainment, retail, and ground transportation businesses.

  Study airports provided information on their weekly arriving visiting general aviation aircraft and on the number of visitors typically arriving on different types of general aviation aircraft. Airports also provided information on the percent of their general aviation visitors that stay only for the day and the percent that spend one or more nights. Airport input and FAA data from the National Offload Program (NOP) both provide operational fleet mix (percentage of operations by jet/piston/turboprop aircraft) for visiting general aviation aircraft. Visitor surveys completed with the assistance of a project

intern, FBOs, and airport managers provide information on the length of time general aviation visitors stay and the average amount visitors spend per trip.

- **Expenditures by Visitors Arriving on Scheduled Commercial Airlines:** Nine study airports have economic impacts associated with visitors who arrive on a scheduled commercial airline flight. Data from the United States Department of Transportation (USDOT) provides an estimate of the portion of each airport's annual enplanements that are visitors versus residents. For this study, WYDOT was the source of total enplanements and visiting passengers for all commercial service study airports.

  Similar to general aviation visitors, commercial visitors have spending that supports employment and associated payroll. With help from the study's commercial airports, surveys of visitors using Wyoming's commercial airports were conducted. The surveys determine the average length of stay and visitor spending patterns for each airport. Estimates of annual economic impacts in this category are developed using estimates of annual visitors and average visitor spending per trip.

When the annual economic impacts associated with each of these five categories are combined, it helps to tell the story of the total economic impact attributed to each study airport. Economic impacts for each of the categories above are generally presented individually for each airport. Reporting by individual impact category is a departure from a similar statewide economic impact study that WYDOT published in 2013. That prior study combined impacts in the airport management, airport business tenant, and capital investment category into a single impact number. In the 2013 study, these combined impacts were reported as "on-airport" impacts. In this 2020 study, impacts in each of these three categories are generally reported separately. This type of "unbundled" reporting of each airport's economic impact makes it easier to determine how the management, business tenant, and capital investment categories contribute to each airport's reported total annual economic impact.

2.2 Measurements for Airport-Specific and Statewide Economic Impacts

All annual economic impacts in this study are estimated using four measurements: employment, payroll, spending, and annual economic activity. In this study, annual economic activity is the sum of payroll and spending. These two measurements reflect the airport-associated economic impact that is realized in the state's economy, as well as in local economies.

In the 2013 WYDOT economic impact study, impacts were expressed using output as a measure. Output was used previously, as opposed to the annual economic activity measurement used in this study. Output includes many factors which include sales, revenue, and income that are realized both within and beyond Wyoming. Since the goal of this study is to measure airport-related economic impacts realized by the state's economy and by local economies throughout the state, annual economic activity was selected as a more appropriate measure. Each impact measurement is discussed below:

- **Employment** is the most straightforward and the most easily understood measurement of economic impact. Employment is identified for airport management and airport business tenants through surveys and interviews. Expenditures by visitors who arrive on general aviation aircraft or on scheduled commercial carriers also support other employment. The investment made to implement capital projects supports additional employment over the duration of a project's planning and construction.

  All part-time and seasonal jobs that are less than full-time were converted to full-time equivalent employment (FTE). The conversion to full-time positions (both on- and off-airport) considers the number of reported hours that each employee works directly in support of an airport or the annual payroll that is associated with these less than full-time employees.

In some instances, airports have reported jobs in various impact categories that equal less than one FTE. In subsequent tables in this report, these less than full-time jobs are reported and shown as <1. Less than full-time (or fractions of) jobs identified in this analysis are summed to establish the number of FTEs the cumulative less than full-time jobs support.

- **Payroll** is associated with all employment supported by airport management, airport business tenants, average annual capital investment, and air visitor expenditures.
- **Spending** for airport management and airport business tenants equals their annual purchase of goods, materials, services, and supplies to run the airport or their business. Spending for airports and airport business tenants does not include payroll or capital investment. In the visitor categories, expenditures include the amounts that visitors pay for lodging, food, ground transportation, entertainment, and retail. Total expenditures, minus the portion of those expenditures that is payroll-related, represents spending in this category. In the average annual capital investment category, spending is equal to total investment made to implement projects, minus the estimated cost for labor (payroll).
- **Annual Economic Activity** for each of the economic impact categories is the sum of payroll and spending. This measure is reflective of the total annual economic benefit the economy realizes from airports and airport-supported activities. The objective of an economic impact study is to measure the economic benefit from a certain activity, in this case, the operation of 34 public airports in Wyoming. As payroll and spending associated with the airports are pushed into the state and local economies, combined, payroll plus spending (which equals annual economic activity) represents a reasonable approximation of the annual economic impact associated with each airport.

Economic impacts are measured in terms of employment, the annual payroll associated with employment, annual spending, and annual economic activity (expenditures in the payroll and spending categories). Each of these four measurements (employment, payroll, spending, and economic activity) are used to quantify annual economic impacts from airport management, business tenants, average annual capital investment, and all air visitor expenditures for all study airports.

2.3 Process to Estimate Airport-Specific and Statewide Economic Impacts

For this study, all economic impacts are assigned to the following categories: direct impacts, indirect/induced impacts, and total annual economic impacts. These categories are described below. The process to estimate statewide, local, and airport-specific impacts starts with identifying direct impact. Then, an input/output model (IMPLAN) is used to estimate indirect/induced impacts, also known as multiplier impacts. Combined direct plus indirect/induced impacts equal total statewide, local, and airport-specific annual economic impacts. It is important to note that the process used in this study follows FAA guidelines for estimating airport-related economic impacts. Impacts measured in the WYDOT study are described as follows:

- **Direct Impacts:** Direct economic impacts are the start of the economic impact cycle measured in this study. Information concerning direct impacts is collected from airports or airport tenants/businesses, WYDOT, the FAA, USDOT, and from Wyoming's visitors who arrive by air. Since direct impacts can be measured or counted in some way, it is important that these impacts be accurate and credible. Direct impacts are documented for employment, payroll, spending, and annual economic activity associated with the five categories of economic activity that are applicable to each study airport. It is worth noting that not all Wyoming airports have impacts in the management, business tenant, capital investment, and/or visitor spending categories.
- **Indirect/Induced Impacts:** When direct impacts enter state and local economies, they re-circulate or multiply, creating additional economic impacts. Impacts in the indirect and induced categories are often referred to as multiplier impacts. For example, when a "direct" airport employee uses his or her

payroll to buy groceries, pay for childcare, or take their family pet to a local veterinarian, the employee's direct airport-related payroll is infused into other sectors of the economy, creating additional economic impacts. Induced impacts are primarily associated with increases in income/payroll, and indirect impacts result from increases in spending.

An econometric input/output model, IMPLAN (approved for use by FAA), is used to estimate additional indirect and induced impacts. Indirect and induced impacts are experienced in the state economy and in local economies as a result of the initial direct impacts. Indirect impacts result from industries purchasing from other industries, whereas induced impacts result from the expenditure of new household income associated with direct and indirect impacts. When summed, direct, indirect, and induced impacts equal total annual economic impacts.

For the 2020 Aviation Economic Impact Study, both a statewide and 23 county-specific models were developed using IMPLAN data. The economic impact for each study airport is expressed for both its impact on the state economy, as well as its impact on just its local economy. Multipliers used in this study to estimate indirect and induced impacts measure the number of times the initial direct dollar is re-spent in the state or local economy. The more highly developed the economy being studied, the greater the number of times the initial dollar is re-spent before it leaks outside the area being modeled.

For this study, the indirect/induced impacts resulting from the state model will most always be greater than the indirect/induced impacts measured using the local/county models. This is because while you may not be able to purchase all you need locally, you can still most likely make your purchase within the state. While the initial dollar spent may leak more quickly outside the local economy, that initial dollar still has a higher propensity to be re-spent within Wyoming before it leaks outside the state's economy. As an example, if airport development projects are undertaken in smaller more rural areas of Wyoming, it is possible that not all of the materials or labor needed for the project can be sourced locally. The needed items, nevertheless, are still most likely available within the state. So, while local re-spending (indirect/induced or multiplier impacts) may be more limited, the benefit of the initial spending is still experienced within the state.

For each airport, both statewide and local economic impacts are estimated using one set of multipliers that are specific to the state's economy and a second set of multipliers that are specific to just the airport's local economy. Later sections of this report provide more information on the modeling process used to estimate indirect/induced economic impacts.

- **Total Economic Impacts:** Total impacts are the sum of direct and indirect/induced impacts for each of the measurements and impact categories. For this study, each airport will have an estimate of its total impact on the state's economy and a separate estimate for its total impact on just its local economy. In most instances, local economic impacts will be less than the airport's statewide economic impact for the reasons discussed above.

The next section of this report documents each airport's direct economic impacts.

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3. Direct Economic Impacts for Study Airports

All economic impacts for the study airports start with impacts in the direct impact category. The following sections discuss direct economic impacts in the airport management, airport business tenants, average annual capital investment, and both air visitor categories.

All direct economic impacts for the airports start with the daily operation of the airports; activities needed to serve customers and aircraft using each airport; steps the airports take to improve and expand their infrastructure; and expenditures associated with visitors who arrive in Wyoming via the airports. While not all direct impacts discussed take place on-airport, all direct impacts are linked directly to the airports and their operations.

3.1 Estimates of Direct Impacts from Airport Management at Study Airports

For this category, each of the commercial and general aviation study airports provided information to establish their direct impacts in the airport management category. Through surveys, on-site visits, and phone interviews, airports provided information on airport management-related employment, payroll, and the airport's annual non-capital and non-payroll spending that supports airport operations. When all direct impacts were documented, each airport manager/contact had the opportunity to review the direct impacts for their airport. This review took place early in May 2020.

In this category, only direct employment and direct annual economic activity are reported. Since general aviation airports have only one or two employees in the airport management category, direct payroll is not reported. Direct annual economic activity reported in this section represents direct payroll plus direct spending to operate the airport. Airport expenses include categories such as utilities, insurance, routine upkeep, cleaning, supplies, services, depreciation, and rent.

When reviewing the direct impacts for each airport, it is important to understand that some airports have limited, or sometimes no, employment/payroll in the airport management category. Some airports are managed by unpaid volunteers; because these are not salaried positions, these individuals are not included in this analysis. Also, some airports contract with an FBO to provide management functions. In these instances, employment is reported only in the business tenant category. Various operating arrangements that are specific to each airport can limit employment (direct impacts) in the airport management category.

Table 3-1 shows direct full-time equivalent (FTE) employment estimated for each study airport, as well as the airport's estimated direct annual economic activity; direct annual economic activity includes spending to support airport operations and payroll. For this analysis, this information is obtained from each study airport. Employment shown in **Table 3-1** is the sum of:

- All full-time on- and off-airport jobs
- All part-time on- and off-airport jobs (translated into FTE jobs based on the number of hours worked or the salary paid to each airport employee)
- All seasonal jobs (translated into FTE jobs based on the number of hours worked or the salary paid for work at the airport).

When employment is reported as <1, this indicates that all less than full-time direct jobs when combined do not total one full time position.

Table 3-1: Direct Airport Management Employment and Annual Economic Activity for Study Airports

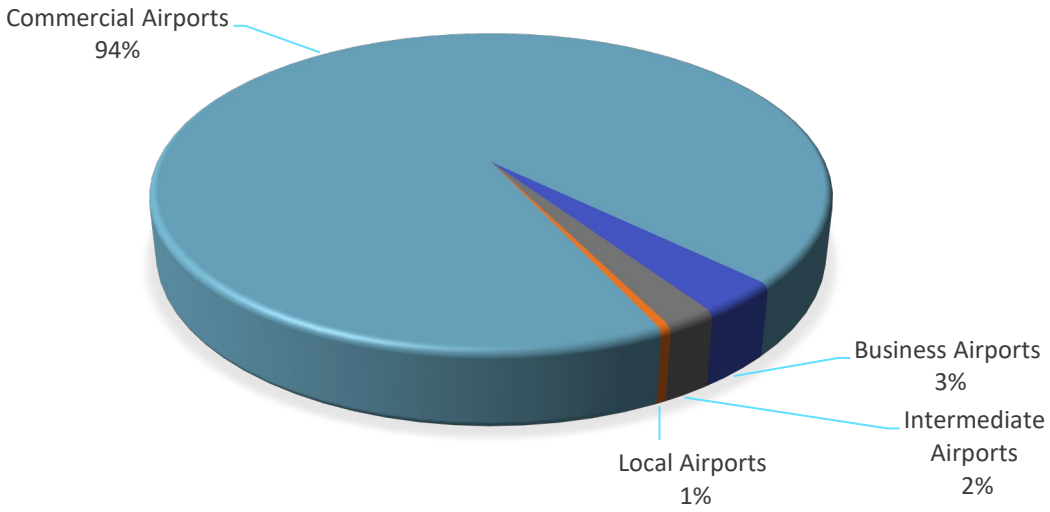
FAA ID	Airport Name	Direct Employment	Direct Annual Economic Activity
Commercial Service Airports			
CPR	Casper - Natrona County International Airport	28	$4,277,200
CYS	Cheyenne Regional Airport - Jerry Olson Field	25	$7,418,600
COD	Cody - Yellowstone Regional Airport	13	$855,700
GCC	Gillette - Northeast Wyoming Regional Airport	9	$1,355,300
JAC	Jackson Hole Airport	90	$33,309,700
LAR	Laramie Regional Airport	7	$1,626,200
RIW	Riverton - Central Wyoming Regional Airport	6	$822,900
RKS	Rock Springs - Southwest Wyoming Regional Airport	9	$3,271,600
SHR	Sheridan County Airport	8	$3,777,000
	Commercial Service Airports Total	**195**	**$56,714,200**
Business Airports			
AFO	Afton - Lincoln County Municipal Airport	1	$209,100
BYG	Buffalo - Johnson County Airport	1	$223,200
DGW	Douglas - Converse County Airport	<1	$142,200
EVW	Evanston-Uinta County Airport - Burns Field	1	$231,000
GEY	Greybull - South Big Horn County Airport	<1	$276,800
LND	Lander - Hunt Field	<1	$49,600
PNA	Pinedale - Ralph Wenz Field	1	$274,400
RWL	Rawlins Municipal Airport - Harvey Field	<1	$30,900
SAA	Saratoga - Shively Field	<1	$82,300
TOR	Torrington Municipal Airport	2	$256,900
WRL	Worland Municipal Airport	3	$229,800
	Business Airports Total	**10**	**$2,006,200**
Intermediate Airports			
BPI	Big Piney - Miley Memorial Field	2	$157,000
DUB	Dubois Municipal Airport	<1	$43,900
FBR	Fort Bridger Airport	1	$142,900
GUR	Guernsey - Camp Guernsey Army Airfield	<1	$85,100
EMM	Kemmerer Municipal Airport	1	$136,600
ECS	Newcastle - Mondell Field	<1	$51,400
82V	Pine Bluffs Municipal Airport	<1	$122,400
POY	Powell Municipal Airport	2	$291,900
HSG	Thermopolis - Hot Springs County Airport	<1	$158,900
EAN	Wheatland - Phifer Airfield	<1	$53,600
	Intermediate Airports Total	**7**	**$1,243,700**

FAA ID	Airport Name	Direct Employment	Direct Annual Economic Activity
Local Airports			
U68	Cowley - North Big Horn County Airport	<1	$115,400
DWX	Dixon Airport	<1	$69,000
W43	Hulett Municipal Airport	<1	$47,900
LSK	Lusk Municipal Airport	<1	$28,500
	Local Airports Total	**1**	**$260,800**
	All Airports Total	**213**	**$60,224,900**

Source: Study Airports

As **Table 3-1** shows, direct total annual economic activity for all study airports in the airport management category is estimated at $60.2 million. **Figure 3-1** shows the distribution of this annual economic activity between the study's general aviation and commercial airports. This figure also shows the distribution of direct airport management annual economic activity for general aviation airports in each state role category. As this figure shows, direct annual economic activity is higher at commercial service airports, when compared to all general aviation airports in all roles. Given their levels of activity, multiple business tenants, and operational complexity, it typically takes a much larger management staff to operate a commercial service airport than it does to operate a general aviation airport.

Figure 3-1: Distribution of Direct Airport Management Annual Economic Activity by Airport Role



Source: Jviation

3.2 Estimates of Direct Impacts from Business Tenants at Study Airports

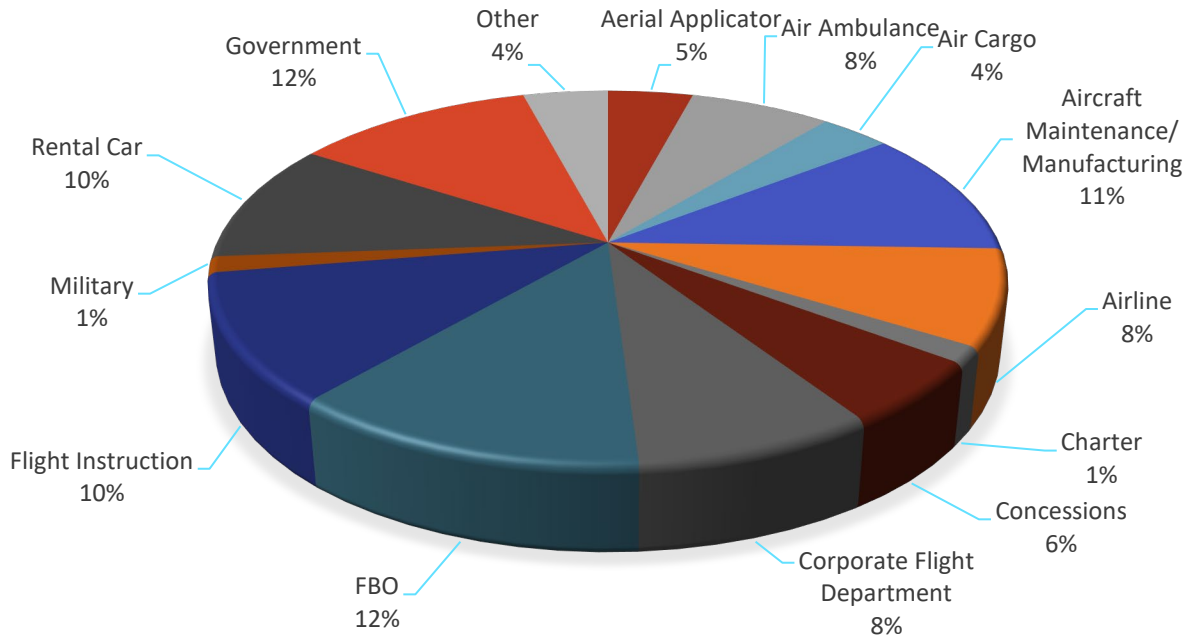
Representatives of study airports provided information for on-airport aviation-related business tenants that provide aviation services at their respective airport. For this study, business tenants are defined as revenue-generating aviation-related companies with paid employees. All business tenants at commercial and general aviation airports were contacted on several occasions either in person, by email, or by phone to obtain information on:

- The types of services they provide
- Their full-time, part-time, and seasonal employment
- Their annual payroll
- Their annual expenditures to purchase goods, materials, and supplies to run their business

Business tenants at airports change occasionally; information for business tenant impacts presented in this report represents conditions at the time data collection concluded. Generally, tenant-related data for each airport was current as of the beginning of March 2020. Airports were provided an opportunity to confirm business tenant-related information as part of the study's data review process which took place in early May 2020. Direct impacts for business tenants reported in this section reflect pre-COVID conditions.

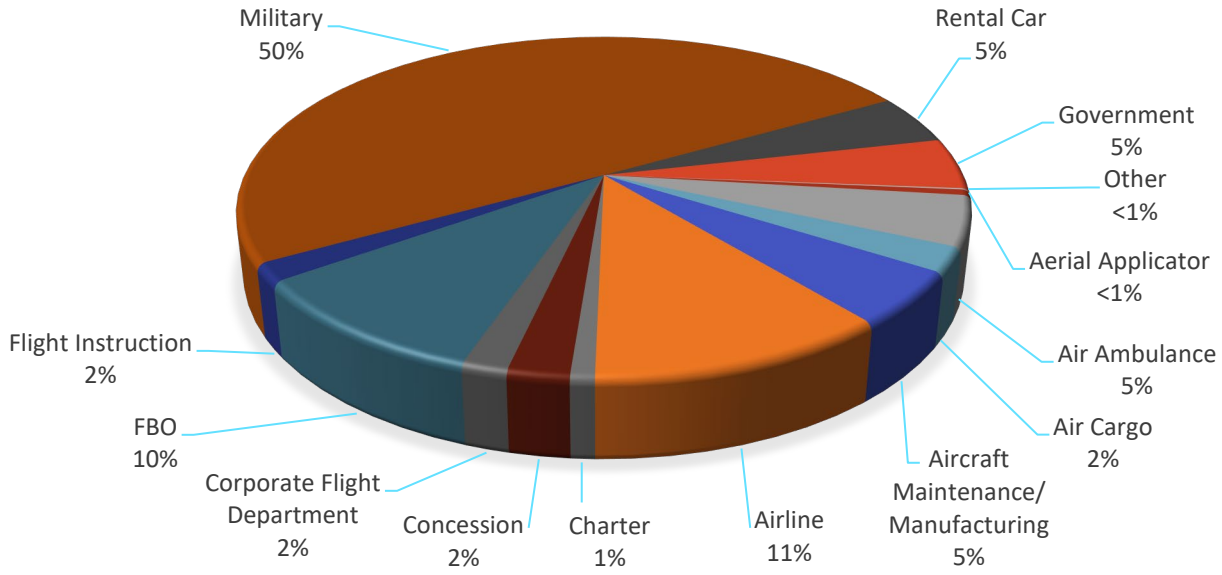
Data collection efforts show that, statewide, there are 146 different aviation-related business tenants and that these businesses support total direct full-time employment estimated at 2,041 jobs. **Figure 3-2** shows the statewide distribution of airport business tenants by primary service type, while **Figure 3-3** shows the statewide distribution of business tenants by employment type. Information presented in **Figures 3-2** and **3-3** reflects business tenants at all study airports.

Figure 3-2: Distribution of Airport Business Tenants by Service Type



Source: Study Surveys

Figure 3-3: Distribution of Airport Business Tenant Employment by Service Type



Source: Study Surveys

Study research shows that some smaller general aviation airports do not have revenue-generating aviation-related business tenants. This does not imply that these airports do not support important uses and users. Ways that each airport supports the communities it serves are documented in Individual Airport Reports. These reports are available by visiting http://www.dot.state.wy.us/home/aeronautics.html. Later sections of this report summarize some of the airport-specific benefits identified through study research.

Several general aviation airports report only one on-airport business tenant. Direct payroll and spending for business tenants at the study airports is not reported here. **Table 3-2** reflects total direct employment and annual direct annual economic activity (payroll plus spending) for all business tenants at each of the study airports. If an airport has multiple business tenants, the employment for all tenants is summed in this table. Direct annual tenant economic activity, shown in **Table 3-2**, does not reflect spending for capital projects, as this spending is accounted for in another impact category. **Table 3-2** provides total direct full-time business tenant-related employment for each airport; part-time and seasonal jobs have been converted to FTE jobs based on the reported number of hours these employees work directly in support of a business tenant or based on the annual salary they were paid.

Table 3-2 shows the number of aviation-related business tenants identified at each airport, the estimated number of direct full-time jobs that these business tenants support, and the direct annual economic activity (payroll and spending) for all business tenants. Direct impacts are used in subsequent analyses to estimate indirect/induced impacts, both statewide and local, associated with the airport business tenant category.

Table 3-2: Direct Business Tenant Employment and Annual Economic Activity for Study Airports

FAA ID	Airport Name	Number of Tenants	Direct Employment	Direct Annual Economic Activity
Commercial Service Airports				
CPR	Casper - Natrona County International Airport	31	206	$45,099,800
CYS	Cheyenne Regional Airport - Jerry Olson Field	11	1,040	$98,038,800
COD	Cody - Yellowstone Regional Airport	7	88	$14,563,200

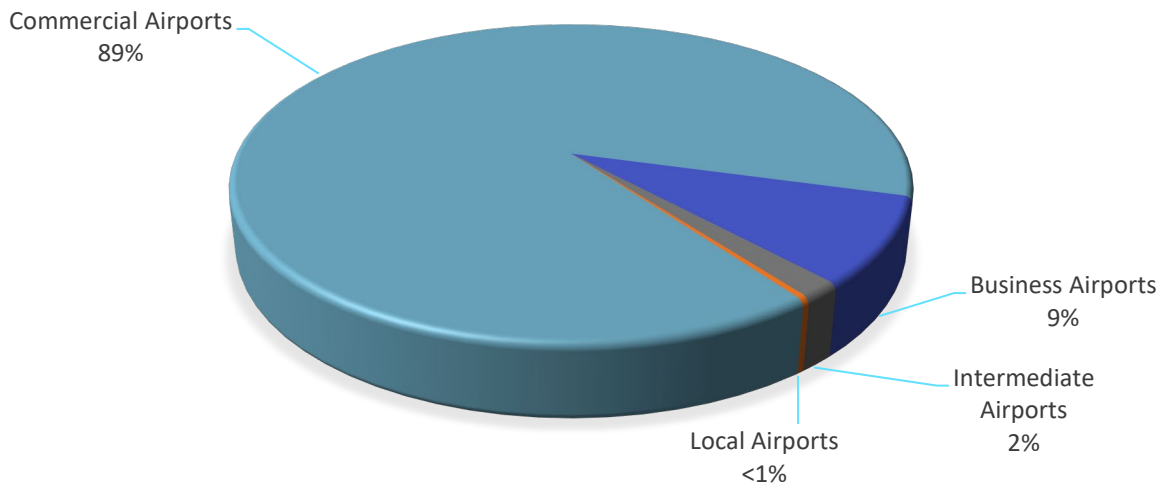
FAA ID	Airport Name	Number of Tenants	Direct Employment	Direct Annual Economic Activity
GCC	Gillette - Northeast Wyoming Regional Airport	10	44	$7,295,400
JAC	Jackson Hole Airport	11	270	$73,734,500
LAR	Laramie Regional Airport	8	41	$8,899,900
RIW	Riverton - Central Wyoming Regional Airport	9	41	$6,095,200
RKS	Rock Springs - Southwest Wyoming Regional Airport	7	35	$5,006,300
SHR	Sheridan County Airport	7	93	$17,480,000
	Commercial Service Airports Total	**101**	**1,858**	**$276,213,100**
Business Airports				
AFO	Afton - Lincoln County Municipal Airport	4	56	$10,707,600
BYG	Buffalo - Johnson County Airport	2	3	$670,000
DGW	Douglas - Converse County Airport	1	2	$346,500
EVW	Evanston-Uinta County Airport - Burns Field	2	4	$676,100
GEY	Greybull - South Big Horn County Airport	2	15	$1,502,700
LND	Lander - Hunt Field	7	21	$3,804,400
PNA	Pinedale - Ralph Wenz Field	3	7	$982,000
RWL	Rawlins Municipal Airport - Harvey Field	2	8	$1,296,000
SAA	Saratoga - Shively Field	2	6	$1,704,900
TOR	Torrington Municipal Airport	2	4	$772,400
WRL	Worland Municipal Airport	3	18	$4,727,300
	Business Airports Total	**30**	**144**	**$27,189,900**
Intermediate Airports				
BPI	Big Piney - Miley Memorial Field	-	-	$0
DUB	Dubois Municipal Airport	1	1	$124,600
FBR	Fort Bridger Airport	-	-	$0
GUR	Guernsey - Camp Guernsey Army Airfield	1	12	$1,810,700
EMM	Kemmerer Municipal Airport	-	-	$0
ECS	Newcastle - Mondell Field	2	2	$269,800
82V	Pine Bluffs Municipal Airport	4	7	$1,350,200
POY	Powell Municipal Airport	2	7	$720,500
HSG	Thermopolis - Hot Springs County Airport	3	7	$718,000
EAN	Wheatland - Phifer Airfield	-	-	$0
	Intermediate Airports Total	**13**	**36**	**$4,993,800**
Local Airports				
U68	Cowley - North Big Horn County Airport	1	1	$181,000
DWX	Dixon Airport	1	2	$803,100
W43	Hulett Municipal Airport	-	-	$0
LSK	Lusk Municipal Airport	-	-	$0

FAA ID	Airport Name	Number of Tenants	Direct Employment	Direct Annual Economic Activity
	Local Airports Total	**2**	**3**	**$984,100**
	All Airports Total	**146**	**2,041**	**$309,380,900**

Source: Airport Tenants and Airport Management

Figure 3-4 shows how all airport business tenant-related impacts are distributed between the study's commercial service and general aviation airports by airport role category. As **Figure 3-4** shows, 89 percent of the business tenant direct annual economic activity is associated with commercial service study airports, while the remaining 11 percent is associated with the general aviation airports, regardless of their role category.

Figure 3-4: Distribution of Airport Business Tenant Annual Economic Activity by Airport Role



Source: Jviation

3.3 Estimates of Direct Impacts from Average Annual Capital Investment at Study Airports

While direct capital investment takes place at an airport, this spending supports employment and payroll over the duration of the project's implementation. Each airport's direct economic impact in this category can change between cycles for measuring/reporting economic impacts. This is because capital investment at any given airport changes year-to-year. Some study airports had notable decreases in their average annual capital investment between the 2013 and 2020 reporting periods, while other airports had notable increases.

For this study, direct capital investment impacts are estimated using information supplied by WYDOT, the FAA, study airports, and business tenants at the airports. Investment made by the Wyoming Business Council was also considered in this impact category. The goal was to capture all investments made at each airport by local, state, and federal governments, as well as to consider additional investment made by business tenants and others. Local funds are most often invested, although not exclusively, to match state and FAA grants. Private investment takes place at some study airports, most often to build hangars.

Since capital investment changes year-to-year, average annual investment (both public and private) over a five-year historic period is used to estimate direct impacts in this category. Impacts in this category consider only

investment that has already been programmed. For this study, historic capital investment made between 2015 and 2019 was considered to estimate each airport's average annual capital investment.

In the capital investment impact category, average investment, both statewide and airport-specific, equates to "annual economic activity" (defined in this study as payroll plus spending). This is because reported investment values reflect both the cost of materials and the cost of labor (payroll).

Once the average annual capital investment is established, information in the IMPLAN model is used to estimate direct employment that the investment supports. Once employment is estimated, direct payroll for this impact category is derived from Bureau of Labor Statistics. Once direct payroll is established, average annual capital investment, minus the payroll, indicates the portion of the investment in this category that was actual "spending" for construction-related materials.

Table 3-3 reports average annual direct economic impacts for each study airport in the capital investment category. Information presented in **Table 3-3** is based on the following:

- Average annual investment for capital projects over the past five years (2015-2019), shown in the table, is direct annual economic activity; this data is from WYDOT, FAA, airports, business tenants, and the Wyoming Business Council.
- Direct employment supported by capital investment is based on the five-year average of capital investment and is estimated using ratios in IMPLAN that reflect jobs supported for each $1 million invested.
- Direct payroll associated with employment in the capital investment category is from data obtained from the Bureau of Labor Statistics. Average payroll per job considers jobs in various categories such as construction, planning, and engineering.
- Direct spending for goods, materials, and supplies to support capital projects is equal to direct annual economic activity, minus direct annual payroll.

For some study airports, as **Table 3-3** reflects, average annual capital investment, over the past five years, was not high enough to support one or more jobs. Direct jobs supported by average annual capital investment include those related to planning, consulting, permitting, designing, engineering, and building capital projects.

Table 3-3: Direct Impacts from Average Annual Capital Investment for Study Airports

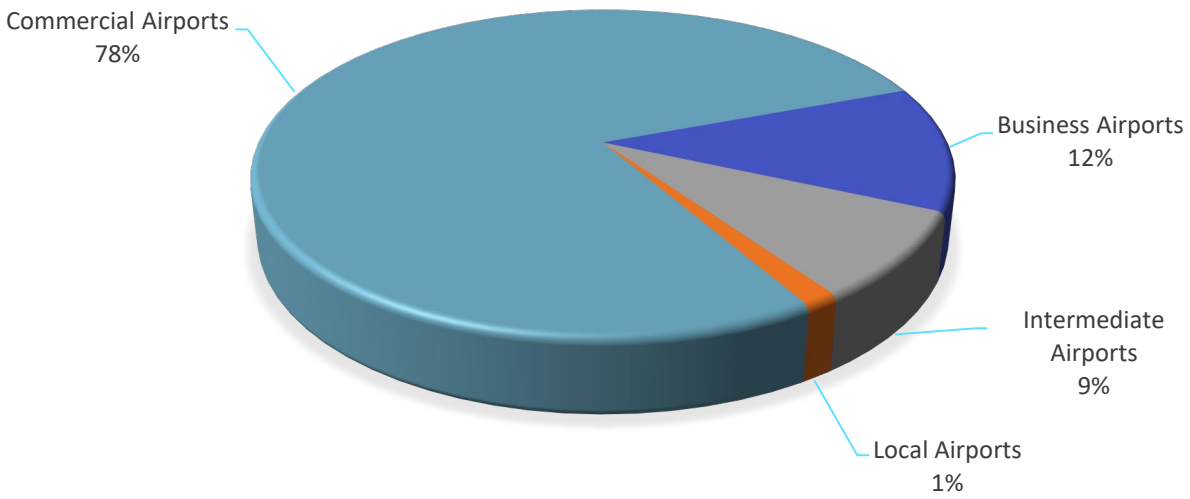
FAA ID	Airport Name	Direct Employment	Direct Payroll	Direct Spending	Direct Annual Economic Activity
Commercial Service Airports					
CPR	Casper - Natrona County International Airport	41	$1,564,800	$6,900,400	$8,465,200
CYS	Cheyenne Regional Airport - Jerry Olson Field	25	$1,023,900	$4,089,100	$5,113,000
COD	Cody - Yellowstone Regional Airport	14	$536,800	$2,307,800	$2,844,600
GCC	Gillette - Northeast Wyoming Regional Airport	10	$386,900	$1,622,400	$2,009,300
JAC	Jackson Hole Airport	71	$4,507,000	$10,031,400	$14,538,400
LAR	Laramie Regional Airport	16	$637,700	$2,707,800	$3,345,500
RIW	Riverton - Central Wyoming Regional Airport	17	$626,700	$2,799,200	$3,425,900
RKS	Rock Springs - Southwest Wyoming Regional Airport	23	$856,800	$3,827,100	$4,683,900
SHR	Sheridan County Airport	10	$402,800	$1,710,300	$2,113,100
	Commercial Service Airports Total	**227**	**$10,543,400**	**$35,995,500**	**$46,538,900**

FAA ID	Airport Name	Direct Employment	Direct Payroll	Direct Spending	Direct Annual Economic Activity
Business Airports					
AFO	Afton - Lincoln County Municipal Airport	1	$30,600	$128,400	$159,000
BYG	Buffalo - Johnson County Airport	3	$99,800	$440,000	$539,800
DGW	Douglas - Converse County Airport	5	$215,600	$882,000	$1,097,600
EVW	Evanston-Uinta County Airport - Burns Field	2	$81,200	$382,000	$463,200
GEY	Greybull - South Big Horn County Airport	3	$110,000	$532,100	$642,100
LND	Lander - Hunt Field	7	$261,000	$1,165,900	$1,426,900
PNA	Pinedale - Ralph Wenz Field	5	$202,600	$818,800	$1,021,400
RWL	Rawlins Municipal Airport - Harvey Field	2	$91,000	$391,300	$482,300
SAA	Saratoga - Shively Field	4	$169,400	$728,100	$897,500
TOR	Torrington Municipal Airport	2	$84,000	$406,400	$490,400
WRL	Worland Municipal Airport	1	$33,300	$161,100	$194,400
	Business Airports Total	**35**	**$1,378,500**	**$6,036,100**	**$7,414,600**
Intermediate Airports					
BPI	Big Piney - Miley Memorial Field	1	$42,800	$172,800	$215,600
DUB	Dubois Municipal Airport	3	$100,800	$450,300	$551,100
FBR	Fort Bridger Airport	1	$37,900	$178,400	$216,300
GUR	Guernsey - Camp Guernsey Army Airfield	-	$0	$0	$0
EMM	Kemmerer Municipal Airport	2	$68,800	$288,400	$357,200
ECS	Newcastle - Mondell Field	5	$166,000	$781,500	$947,500
82V	Pine Bluffs Municipal Airport	1	$33,400	$133,400	$166,800
POY	Powell Municipal Airport	2	$62,800	$270,200	$333,000
HSG	Thermopolis - Hot Springs County Airport	3	$111,000	$529,700	$640,700
EAN	Wheatland - Phifer Airfield	9	$306,200	$1,441,300	$1,747,500
	Intermediate Airports Total	**27**	**$929,700**	**$4,246,000**	**$5,175,700**
Local Airports					
U68	Cowley - North Big Horn County Airport	1	$49,800	$240,700	$290,500
DWX	Dixon Airport	2	$61,200	$263,300	$324,500
W43	Hulett Municipal Airport	<1	$300	$1,400	$1,700
LSK	Lusk Municipal Airport	1	$36,400	$168,900	$205,300
	Local Airports Total	**4**	**$147,700**	**$674,300**	**$822,000**
	All Airports Total	**293**	**$12,999,300**	**$46,951,900**	**$59,951,200**

Source: WYDOT, FAA, Airport Managers, Airport Tenants

Figure 3-5 shows how direct annual economic activity in the capital investment category is divided between the study's commercial service and general aviation airports by role category. As shown, 22 percent of the direct capital investment impact is associated with all general aviation airports regardless of role category, while the remaining 78 percent is associated with the study's nine commercial service airports.

Figure 3-5: Distribution of Direct Average Annual Capital Investment Impacts by Airport Role



Source: Jviation

3.4 Estimates of Direct Impacts from General Aviation Visitor Expenditures for Study Airports

Estimates of general aviation visitors are not available from any existing source. Therefore, to estimate general aviation visitors, this study considered a variety of inputs. Estimates of general aviation visitors consider input from study airports, WYDOT, FAA's 5010 Form and National Offload Program (NOP), AirNav Reports, and the Airport Operations and Pilots Association (AOPA).

Study airports and FBOs provided estimates of the number of general aviation visiting aircraft arrivals that each airport accommodates during an average week. Airports and FBOs also provided an estimate for the fleet mix of their weekly visiting general aviation aircraft arrivals (single-engine, multi-engine, and jet). The typical number of visitors that arrive on each type of visiting aircraft was provided by the study airports and/or FBOs. Airports and FBOs also provided information on the distribution of their general aviation visitors between day only and visitors with overnight stays.

To assist with reviewing airport-generated estimates of weekly visiting general aviation aircraft, a second estimate of visiting general aviation aircraft was developed using guidelines from AOPA. AOPA states that "on average" 33 percent of an airport's total annual itinerant arrivals are typically visiting or transient aircraft. While this percentage is reflective of visiting activity for some airports, it is not always applicable for all airports. In addition, this AOPA rule of thumb was developed more than 30 years ago, and the general aviation industry has changed considerably. Nevertheless, the AOPA guidelines still provide a means by which to "check" bottom-up airport and FBO-generated estimates of weekly visiting general aviation aircraft arrivals.

Annual general aviation itinerant arrivals for each study airport are available from FAA's 5010 Form. For airports with air traffic control towers, tower data is the source for itinerant general aviation operations. Transient (visiting) arrivals are most often only a portion of each airport's estimated total annual general aviation itinerant arrivals. The other portion of each airport's itinerant arrivals is attributed to aircraft based at the airport. Transient or visiting aircraft arrivals should almost always be lower than total annual itinerant arrivals. This assumption of course assumes that total itinerant operations are estimated appropriately.

As a third approach, information from each airport's AirNav report was considered. AirNav provides an estimate of daily, weekly, or monthly operations at each airport and the percent of these operations that are thought to be attributed to transient or visiting aircraft.

Once airport, AOPA, and AirNav estimates were prepared, the various estimates of weekly arriving general aircraft were reviewed with WYDOT staff. Ultimately, a preferred estimate of weekly arriving general aviation aircraft was selected for each airport. The preferred estimates were sent to each study airport for their review. Based on additional airport input, a final estimate of weekly visiting/transient general aviation aircraft arrivals was selected for each study airport. Final estimates of weekly visiting aircraft arrivals are used to develop an estimate of annual visiting general aviation aircraft arrivals for each airport. The annual estimate of visiting general aviation aircraft arrivals is developed by multiplying the average weekly estimate by 52.

The next step in the process, to develop estimates of actual general aviation visitors, is to identify a fleet mix for the visiting general aviation aircraft. This is accomplished by first applying airport/FBO estimates for each airport's visiting aircraft fleet mix to total visiting operations; visiting aircraft fleet mix estimates were obtained through study surveys. Airport/FBO fleet mix estimates are compared to each airport's operational fleet mix reported in FAA's NOP. A fleet mix comparison for each airport, along with final WYDOT and airport review, produces a final visiting general aviation aircraft fleet mix.

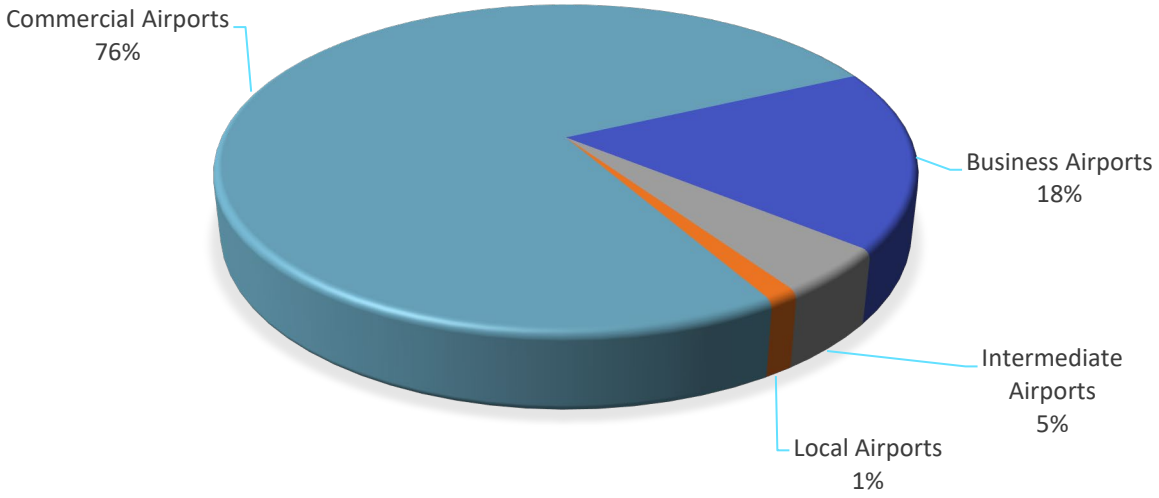
Survey estimates for the average number of visitors (pilots/passengers), by aircraft type, are applied to the resultant visiting operations by aircraft type. Airports and FBOs are the sources of information for estimating visitors per aircraft type that are specific to each study airport. This process leads to final estimates for each airport's annual general aviation visitors. For this study, all estimates of visiting general aviation aircraft and associated visitors are unique to each airport.

Table 3-4 provides the following for each study airport:

- Estimates of total annual visiting general aviation aircraft arrivals
- Estimates of total annual general aviation visitors

As **Table 3-4** shows, the total number of annual visitors, estimated to arrive on general aviation aircraft at all study airports, is 200,351; these visitors arrive at both commercial service and general aviation airports. Over 45,559 visiting general aviation aircraft arrive annually at the study airports. **Figure 3-6** shows the distribution of general aviation visitors between the commercial service and general aviation study airports. As **Figure 3-6** shows, 24 percent of all estimated annual general aviation visitors arrive at one of the general aviation airports, regardless of the airport role category, and the remaining 76 percent arrive in Wyoming via one of the commercial service study airports.

Figure 3-6: Distribution of Annual General Aviation Visitors by Airport Role



Source: Jviation

Table 3-4: Estimates of Annual General Aviation Visitors for Study Airports

FAA ID	Airport Name	Annual Visiting/Transient General Aviation Aircraft Arrivals	Estimated General Aviation Visitors/Passengers
Commercial Service Airports			
CPR	Casper - Natrona County International Airport	7,488	37,440
CYS	Cheyenne Regional Airport - Jerry Olson Field	2,236	8,944
COD	Cody - Yellowstone Regional Airport	2,392	11,003
GCC	Gillette - Northeast Wyoming Regional Airport	3,876	17,056
JAC	Jackson Hole Airport	5,720	36,036
LAR	Laramie Regional Airport	2,080	8,008
RIW	Riverton - Central Wyoming Regional Airport	780	3,861
RKS	Rock Springs - Southwest Wyoming Regional Airport	3,744	17,035
SHR	Sheridan County Airport	3,120	13,728
	Commercial Service Airports Total	**31,436**	**153,111**
Business Airports			
AFO	Afton - Lincoln County Municipal Airport	1,040	2,288
BYG	Buffalo - Johnson County Airport	728	2,002
DGW	Douglas - Converse County Airport	884	2,033
EVW	Evanston-Uinta County Airport - Burns Field	2,184	5,678
GEY	Greybull - South Big Horn County Airport	260	871
LND	Lander - Hunt Field	364	1,092
PNA	Pinedale - Ralph Wenz Field	832	3,494

FAA ID	Airport Name	Annual Visiting/Transient General Aviation Aircraft Arrivals	Estimated General Aviation Visitors/Passengers
RWL	Rawlins Municipal Airport - Harvey Field	572	2,088
SAA	Saratoga - Shively Field	2,340	12,168
TOR	Torrington Municipal Airport	416	1,456
WRL	Worland Municipal Airport	676	2,434
	Business Airports Total	**10,296**	**35,604**
Intermediate Airports			
BPI	Big Piney - Miley Memorial Field	520	1,222
DUB	Dubois Municipal Airport	99	277
FBR	Fort Bridger Airport	260	728
GUR	Guernsey - Camp Guernsey Army Airfield	260	806
EMM	Kemmerer Municipal Airport	416	1,373
ECS	Newcastle - Mondell Field	624	1,872
82V	Pine Bluffs Municipal Airport	36	100
POY	Powell Municipal Airport	416	1,394
HSG	Thermopolis - Hot Springs County Airport	260	676
EAN	Wheatland - Phifer Airfield	156	749
	Intermediate Airports Total	**3,047**	**9,197**
Local Airports			
U68	Cowley - North Big Horn County Airport	156	390
DWX	Dixon Airport	260	936
W43	Hulett Municipal Airport	260	858
LSK	Lusk Municipal Airport	104	255
	Local Airports Total	**780**	**2,439**
	All Airports Total	**45,559**	**200,351**

Source: Airport Managers/FBOs, WYDOT, FAA NOP Data, Aircraft Owners and Pilots Association, AirNav

Using final general aviation visitor estimates from **Table 3-4**, information from visitor surveys (conducted for this study) on trip duration and expenditures per trip is used to estimate annual general aviation visitor expenditures for each airport. Almost 1,200 surveys were collected from general aviation visitors. Airports and/or FBOs at study airports assisted in the process to distribute surveys to departing general aviation visitors. In addition, a project intern conducted supporting visitor intercept surveys at 10 airports around the state. General aviation visitors were asked to provide information on:

- The purpose of their trip
- The duration of their stay, including day only versus overnight travel
- The amount of money spent on lodging, food, retail purchases, ground transportation, and entertainment

General aviation visitor purchases for aviation fuel are not measured in this impact category. Aviation fuel purchases go toward supporting jobs, payroll, and spending for the entity providing fuel at each airport. Counting spending for fuel purchases in the general aviation visitor category results in double-counting economic impacts. Assuming the airport has fuel, the impacts of general aviation fuel purchases are reflected in either the airport management or the business tenant categories.

It is important to note that many general aviation visitors stay for less than one day, and some may stay only a few hours. Visitors in the "day trip" category have more limited spending. Estimates of day-only visitors are developed for each airport and factored into the estimates of total average expenditures per visitor trip. Each airport's final estimate of general aviation visitor expenditures considers expenditures associated with day only visitors and higher expenditures associated with visitors who spend one or more nights.

Once direct annual visitor expenditures are estimated, information from the IMPLAN model (discussed in the next section) is used to determine the number of direct jobs the expenditures support. Direct employment and payroll supported by general aviation visitor expenditures are primarily, but not exclusively, associated with off-airport establishments/businesses. Expenditures by visitors arriving on general aviation aircraft support jobs associated with hotels, entertainment venues, retail shops, ground transportation providers, and restaurants. While direct expenditures from general aviation visitors are reported for all airports, in some cases these expenditures were not enough to support one job or any associated payroll.

Table 3-5 provides information on direct economic activity supported by general aviation visitor expenditures. The estimate of annual general aviation visitor expenditures is derived from study surveys, interviews, and research conducted for this study. Estimates of direct employment in this impact category are based on ratios in the IMPLAN model and payroll information from the Bureau of Labor Statistics. In **Table 3-5**, the annual economic activity resulting from visitors arriving on general aviation aircraft reflects values for both payroll and actual spending for non-payroll related items.

Total economic activity is estimated based on average expenditures per visitor per trip. Average expenditures per visitor trip are different, depending upon the airport, its setting, and the characteristics of the communities the airport serves. Average expenditures per visitor trip consider not only those visitors who spend at least one night, but also visitors who come only for the day and have limited spending. Airports having higher percentages of visitors in the day-trip category have lower average spending per visitor trip.

Table 3-5 is based on the following information:

- Annual direct economic activity from general aviation visitor expenditures is based on annual estimates of general aviation visitors multiplied by average spending per visitor per trip. In the visitor spending category, direct annual economic activity reflects both payroll and spending. Visitor expenditures at a restaurant, for example, are reported as the visitor's total "bill." A restaurant bill reflects the cost of the food, equipment, the establishment, plus the labor to prepare and serve the food. In essence, in the visitor category, both spending and payroll are reported as direct annual economic activity.
- Direct employment supported by direct annual economic activity is based on ratios of jobs per average annual economic activity from the IMPLAN model.
- Direct payroll associated with direct employment, in the general aviation visitor spending category, is based on payroll per job in hospitality sectors for Wyoming obtained from the Bureau of Labor Statistics.
- Direct expenditures for goods, equipment, supplies, and infrastructure in the visitor expenditure category equals direct annual economic activity, minus the direct annual payroll.

Table 3-5: Direct Impacts from General Aviation Visitor Expenditures for Study Airports

FAA ID	Airport Name	Direct Employment	Direct Payroll	Direct Spending	Direct Annual Economic Activity
Commercial Service Airports					
CPR	Casper - Natrona County International Airport	151	$3,727,700	$5,377,700	$9,105,400
CYS	Cheyenne Regional Airport - Jerry Olson Field	38	$1,011,900	$1,269,700	$2,281,600
COD	Cody - Yellowstone Regional Airport	101	$2,531,000	$3,525,100	$6,056,100
GCC	Gillette - Northeast Wyoming Regional Airport	64	$1,643,800	$2,210,800	$3,854,600
JAC	Jackson Hole Airport	536	$22,168,800	$10,119,400	$32,288,200
LAR	Laramie Regional Airport	38	$972,300	$1,330,800	$2,303,100
RIW	Riverton - Central Wyoming Regional Airport	16	$399,700	$586,800	$986,500
RKS	Rock Springs - Southwest Wyoming Regional Airport	76	$1,866,900	$2,741,200	$4,608,100
SHR	Sheridan County Airport	78	$1,985,400	$2,717,200	$4,702,600
	Commercial Service Airports Total	**1,098**	**$36,307,500**	**$29,878,700**	**$66,186,200**
Business Airports					
AFO	Afton - Lincoln County Municipal Airport	4	$107,500	$144,600	$252,100
BYG	Buffalo - Johnson County Airport	5	$114,600	$165,300	$279,900
DGW	Douglas - Converse County Airport	5	$136,600	$177,500	$314,100
EVW	Evanston-Uinta County Airport - Burns Field	15	$339,300	$535,100	$874,400
GEY	Greybull - South Big Horn County Airport	1	$33,700	$55,000	$88,700
LND	Lander - Hunt Field	2	$49,700	$73,000	$122,700
PNA	Pinedale - Ralph Wenz Field	11	$282,400	$360,500	$642,900
RWL	Rawlins Municipal Airport - Harvey Field	4	$102,800	$143,200	$246,000
SAA	Saratoga - Shively Field	138	$3,483,900	$4,852,400	$8,336,300
TOR	Torrington Municipal Airport	3	$60,700	$99,300	$160,000
WRL	Worland Municipal Airport	8	$177,800	$290,700	$468,500
	Business Airports Total	**196**	**$4,889,000**	**$6,896,600**	**$11,785,600**
Intermediate Airports					
BPI	Big Piney - Miley Memorial Field	2	$49,800	$63,500	$113,300
DUB	Dubois Municipal Airport	<1	$11,900	$17,400	$29,300
FBR	Fort Bridger Airport	1	$19,500	$30,700	$50,200
GUR	Guernsey - Camp Guernsey Army Airfield	1	$24,700	$39,000	$63,700
EMM	Kemmerer Municipal Airport	2	$50,900	$68,500	$119,400
ECS	Newcastle - Mondell Field	3	$68,300	$107,700	$176,000
82V	Pine Bluffs Municipal Airport	<1	$3,500	$4,400	$7,900
POY	Powell Municipal Airport	2	$58,400	$81,300	$139,700
HSG	Thermopolis - Hot Springs County Airport	2	$35,100	$56,300	$91,400
EAN	Wheatland - Phifer Airfield	1	$23,000	$36,200	$59,200
	Intermediate Airports Total	**14**	**$345,100**	**$505,000**	**$850,100**

FAA ID	Airport Name	Direct Employment	Direct Payroll	Direct Spending	Direct Annual Economic Activity
Local Airports					
U68	Cowley - North Big Horn County Airport	1	$13,200	$21,500	$34,700
DWX	Dixon Airport	2	$49,600	$69,000	$118,600
W43	Hulett Municipal Airport	1	$32,600	$46,200	$78,800
LSK	Lusk Municipal Airport	<1	$7,600	$11,800	$19,400
	Local Airports Total	**4**	**$103,000**	**$148,500**	**$251,500**
	All Airports Total	**1,312**	**$41,644,600**	**$37,428,800**	**$79,073,400**

Source: Visitor Surveys and IMPLAN

3.5 Estimates of Direct Impacts from Commercial Visitor Expenditures for Commercial Study Airports

Similar to spending from visitors who arrive on general aviation aircraft, visitors to nine study airports who arrive on scheduled commercial airline flights also have expenditures in the direct impact category. For this study, direct annual impact related to commercial service visitors is estimated by first identifying each commercial service airport's total annual commercial airline passenger enplanements.[1] WYDOT provided each commercial airport's 2019 total annual enplanements, 2019 was the most recent calendar year for which a full year of passenger enplanement data was available when this analysis was undertaken.

After identifying annual passenger enplanements, data from the USDOT determines the portion of each airport's annual enplanements that are visitors versus residents. WYDOT also supplied resident versus visitor enplanement percentages for all commercial airports. For many years, the USDOT has conducted a 10 percent ticket sample at all commercial airports in the U.S. This sample provides information on tickets associated with local resident enplanements and tickets associated with visitor-related enplanements. USDOT data, supplied by WYDOT, is the source of information to identify each commercial airport's visitors that arrive on a scheduled commercial airline flight.

Table 3-6 provides information on the portion of each study airport's enplanements that are visitors, as opposed to residents. As **Table 3-6** shows, the total number of visitors, estimated to arrive annually on a commercial airline flight at a study airport, is 518,159. It is important to note that the information in **Table 3-6** is not the total number of passengers who enplane on a scheduled commercial airline flight at each commercial airport in Wyoming, it is only the number of passenger enplanements that are visitors.

Study commercial airports collected visitor expenditure data; approximately 26,850 surveys from commercial visitors were submitted. Information collected from visitor surveys is used to develop estimates of average expenditures per visitor, per trip, per study airport. Estimates of average expenditures per visitor trip, as shown in **Table 3-6,** consider expenditures by airport by traveler per trip, as per visitor surveys. Average expenditures per visitor trip considers money paid for lodging, food, ground transportation, retail purchases, and entertainment.

[1] The FAA defines a passenger enplanement as a person boarding in the United States in scheduled or nonscheduled service on aircraft in intrastate, interstate, or foreign air transportation.

Table 3-6: Visitors Arriving on Commercial Airlines at Study Airports and Average Expenditures Per Trip

FAA ID	Airport Name	Total Annual Commercial Visitors	Percentage of Total Enplanements that are Visitors	Average Expenditure per Visitor Trip	Total Commercial Visitor Expenditures
CPR	Casper - Natrona County International Airport	42,162	43%	$710	$29,934,800
CYS	Cheyenne Regional Airport - Jerry Olson Field	8,729	55%	$550	$4,801,000
COD	Cody - Yellowstone Regional Airport	27,934	68%	$720	$20,112,400
GCC	Gillette - Northeast Wyoming Regional Airport	12,218	40%	$660	$8,063,800
JAC	Jackson Hole Airport	397,468	90%	$1,920	$763,138,400
LAR	Laramie Regional Airport	9,931	55%	$690	$6,852,400
RIW	Riverton - Central Wyoming Regional Airport	4,259	57%	$610	$2,598,100
RKS	Rock Springs - Southwest Wyoming Regional Airport	9,810	41%	$620	$6,082,000
SHR	Sheridan County Airport	5,648	58%	$580	$3,276,100
	Commercial Service Airports Total	**518,159**	**77%**	**$1,631**	**$844,859,000**

Source: Study Airports, FAA, and USDOT

Beginning in spring/summer of the fall of 2019 and extending into the beginning of March 2020, passenger surveys were available to enplaning commercial airline passengers at study airports. At most commercial airports, surveys were available to departing visitors when they logged on to an airport's Wi-Fi. In some instances, airports distributed paper surveys to departing passengers and/or interns completed visitor intercept surveys. The average length of stay and average expenditures per day, obtained from the survey responses at each airport, are used to estimate direct annual commercial visitor expenditures.

Estimates of total annual commercial visitor expenditures (direct annual economic activity) for each airport are developed from visitor estimates multiplied times average expenditures per visitor trip. **Table 3-7** presents annual direct economic activity in this category. Once direct economic activity is estimated, the IMPLAN model is used to determine direct employment supported in this category. Direct payroll for the visitor supported employment is estimated using Wyoming-specific data from the Bureau of Labor Statistics. Direct economic activity, shown in **Table 3-7**, reflects the sum of both visitor spending and employee payroll. Dollars infused into the state economy or local economy by visitors who arrive on a commercial airline flight support the direct economic impacts reported in **Table 3-7**.

Table 3-7: Direct Impacts from Commercial Visitor Expenditures for Study Airports

FAA ID	Airport Name	Direct Employment	Direct Payroll	Direct Spending	Direct Annual Economic Activity
CPR	Casper - Natrona County International Airport	430	$10,594,100	$19,340,700	$29,934,800
CYS	Cheyenne Regional Airport - Jerry Olson Field	69	$1,840,700	$2,960,300	$4,801,000
COD	Cody - Yellowstone Regional Airport	289	$7,266,200	$12,846,200	$20,112,400
GCC	Gillette - Northeast Wyoming Regional Airport	116	$2,972,700	$5,091,100	$8,063,800
JAC	Jackson Hole Airport	10,951	$452,944,700	$310,193,700	$763,138,400
LAR	Laramie Regional Airport	98	$2,500,900	$4,351,500	$6,852,400
RIW	Riverton - Central Wyoming Regional Airport	37	$909,900	$1,688,200	$2,598,100
RKS	Rock Springs - Southwest Wyoming Regional Airport	87	$2,130,000	$3,952,000	$6,082,000

FAA ID	Airport Name	Direct Employment	Direct Payroll	Direct Spending	Direct Annual Economic Activity
SHR	Sheridan County Airport	47	$1,195,700	$2,080,400	$3,276,100
	Commercial Service Airports Total	**12,124**	**$482,354,900**	**$362,504,100**	**$844,859,000**

Source: Study Passenger Surveys and IMPLAN

This study estimates that visitors who arrive on a commercial airline flight are responsible for total direct annual economic activity of over $844 million. Surveys completed indicate that visitor spending patterns differ by commercial airport. The length of stay for overnight visitors also shows variances by airport. These differences are reflected in the average visitor expenditure estimates per trip for each airport shown in **Table 3-6**.

For expenditures per trip per airport reported above, all expenditures are assigned to one of the following categories: lodging, food, ground transportation, entertainment, or retail spending. The distribution of expenditures by category is necessary for two reasons. One relates to establishing indirect/induced impacts associated with visitor expenditures; multipliers differ depending on which category the expenditures take place. For instance, the direct dollar spent in the restaurant category tends to have a greater subsequent impact than the same dollar spent in the retail category. This is because the retail item being purchased is most often not manufactured in Wyoming, or perhaps even in the U.S. Secondly, subsequently in this study, tax revenues associated with visitor expenditures will be estimated. As a result, expenditures in different categories are subject to different tax rates. For these reasons, visitor expenditures are allocated to different categories. This is true for both commercial and general aviation visitor expenditures.

3.6 Summary of Total Direct Economic Impacts for Study Airports

The preceding sections present information on direct employment, payroll, spending, and annual economic activity (spending plus payroll) for airport management, airport business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures.

Table 3-8 presents total annual statewide direct economic impacts for employment, payroll, spending, and economic activity. These statewide impacts represent direct annual impacts for airport management, airport business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures (as applicable) for each study airport. Since multiple categories of impact are presented in this table, direct payroll and direct spending are reported.

Table 3-8: Summary of Total Annual Statewide Direct Economic Impact by Category for Study Airports

Category	Direct Employment	Direct Payroll	Direct Spending	Direct Economic Activity
Airport Management	213	$11,970,000	$48,254,900	$60,224,900
Airport Business Tenants	2,041	$101,450,900	$207,930,000	$309,380,900
Capital Investment	293	$12,999,300	$46,951,900	$59,951,200
General Aviation Visitors	1,312	$41,644,600	$37,428,800	$79,073,400
Commercial Visitors	12,124	$482,354,900	$362,504,100	$844,859,000
Total	**15,983**	**$650,419,700**	**$703,069,700**	**$1,353,489,400**

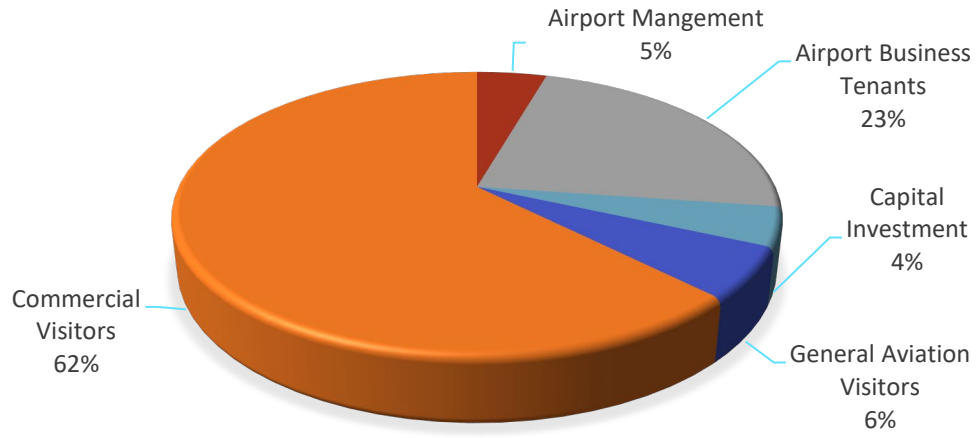
Source: Study Analysis and IMPLAN*

Direct impacts are typically the easiest to understand because direct impacts are related to activity at each airport that can be quantified, counted, or measured in some way. **Table 3-9** provides a summary of direct impacts by study airport for employment, payroll, spending, and annual economic activity. This information is

a sum of direct impacts previously presented for each airport for each of the five categories of economic impact: airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and when applicable, commercial visitor expenditures.

This section presents direct impacts upon which all total annual economic impacts are estimated, subsequently, in this report. **Figure 3-7** shows the distribution of direct annual economic activity by category for all study airports; the commercial service visitor category is responsible for the highest percentage of direct annual economic activity among all study airports. **Section 4** of this report shows how direct impacts multiply once they enter the state and local economies.

Figure 3-7: Distribution of Direct Total Annual Economic Activity by Category



Source: Jviation

Table 3-9: Summary of Total Annual Direct Impacts for Study Airports

FAA ID	Airport Name	Total Direct Employment	Total Direct Payroll	Total Direct Spending	Total Direct Annual Economic Activity
Commercial Service Airports					
CPR	Casper - Natrona County International Airport	856	$29,967,500	$66,914,900	$96,882,400
CYS	Cheyenne Regional Airport - Jerry Olson Field	1,197	$48,651,300	$69,001,700	$117,653,000
COD	Cody - Yellowstone Regional Airport	505	$14,681,100	$29,750,900	$44,432,000
GCC	Gillette - Northeast Wyoming Regional Airport	243	$7,730,700	$14,847,700	$22,578,400
JAC	Jackson Hole Airport	11,918	$503,036,800	$413,972,400	$917,009,200
LAR	Laramie Regional Airport	200	$7,264,200	$15,762,900	$23,027,100
RIW	Riverton - Central Wyoming Regional Airport	117	$4,600,600	$9,328,000	$13,928,600
RKS	Rock Springs - Southwest Wyoming Regional Airport	230	$7,419,600	$16,232,300	$23,651,900
SHR	Sheridan County Airport	236	$8,700,600	$22,648,200	$31,348,800
	Commercial Service Airports Total	**15,502**	**$632,052,400**	**$658,459,000**	**$1,290,511,400**
Business Airports					
AFO	Afton - Lincoln County Municipal Airport	62	$2,845,500	$8,482,300	$11,327,800
BYG	Buffalo - Johnson County Airport	12	$360,600	$1,352,300	$1,712,900

FAA ID	Airport Name	Total Direct Employment	Total Direct Payroll	Total Direct Spending	Total Direct Annual Economic Activity
DGW	Douglas - Converse County Airport	12	$442,200	$1,458,200	$1,900,400
EVW	Evanston-Uinta County Airport - Burns Field	22	$613,100	$1,631,600	$2,244,700
GEY	Greybull - South Big Horn County Airport	20	$1,000,700	$1,509,600	$2,510,300
LND	Lander - Hunt Field	30	$1,606,900	$3,796,700	$5,403,600
PNA	Pinedale - Ralph Wenz Field	24	$886,400	$2,034,300	$2,920,700
RWL	Rawlins Municipal Airport - Harvey Field	14	$654,300	$1,400,900	$2,055,200
SAA	Saratoga - Shively Field	148	$4,073,200	$6,947,800	$11,021,000
TOR	Torrington Municipal Airport	11	$463,800	$1,215,900	$1,679,700
WRL	Worland Municipal Airport	30	$1,409,100	$4,210,900	$5,620,000
	Business Airports Total	**385**	**$14,355,800**	**$34,040,500**	**$48,396,300**
Intermediate Airports					
BPI	Big Piney - Miley Memorial Field	5	$163,600	$322,300	$485,900
DUB	Dubois Municipal Airport	4	$166,800	$582,100	$748,900
FBR	Fort Bridger Airport	3	$93,200	$316,200	$409,400
GUR	Guernsey - Camp Guernsey Army Airfield	13	$867,600	$1,091,900	$1,959,500
EMM	Kemmerer Municipal Airport	5	$172,300	$440,900	$613,200
ECS	Newcastle - Mondell Field	10	$344,100	$1,100,600	$1,444,700
82V	Pine Bluffs Municipal Airport	9	$431,300	$1,216,000	$1,647,300
POY	Powell Municipal Airport	13	$481,000	$1,004,100	$1,485,100
HSG	Thermopolis - Hot Springs County Airport	12	$424,600	$1,184,400	$1,609,000
EAN	Wheatland - Phifer Airfield	10	$338,200	$1,522,100	$1,860,300
	Intermediate Airports Total	**84**	**$3,482,700**	**$8,780,600**	**$12,263,300**
Local Airports					
U68	Cowley - North Big Horn County Airport	3	$114,100	$507,500	$621,600
DWX	Dixon Airport	7	$319,200	$996,000	$1,315,200
W43	Hulett Municipal Airport	1	$42,400	$86,000	$128,400
LSK	Lusk Municipal Airport	1	$53,100	$200,100	$253,200
	Local Airports Total	**12**	**$528,800**	**$1,789,600**	**$2,318,400**
	All Airports Total	**15,983**	**$650,419,700**	**$703,069,700**	**$1,353,489,400**

Source: Study Analysis and IMPLAN

3.7 Comparison of 2013 and 2020 Direct Statewide Economic Impacts

Prior to this update to Wyoming's Aviation Economic Impact Study, the last statewide economic impact study was published in 2013. The data that supported the 2013 study was collected in 2012. Changes in total direct economic impacts between the two reporting periods are summarized as follows:

- Airport Management – This study estimated total direct employment in the airport management category at 213. Previously, the 2013 study estimated total direct statewide employment in this impact category at 194.

- Business Tenants – At the time data was collected for the 2013 study, business tenants had total statewide direct employment reported at 1,565. For this update, total statewide direct employment in the business tenant category increased to 2,041.
- Average Annual Capital Investment – Direct impacts in the 2013 study were based on statewide average annual capital investment that was estimated at $41.3 million. For this current study, direct statewide average annual capital investment for all study airports is estimated at $59.9 million.
- Expenditures by General Aviation Visitors – The 2013 study estimated that on an annual basis, 148,572 visitors arrived at all 34 study airports on general aviation aircraft. This study estimates that annual general aviation visitors have increased to 200,350. General aviation visitor direct expenditures have also increased, rising from an estimated statewide level of $49.7 million, as reported in the 2013 study, to $79.1 million as estimated in this 2020 study.
- Expenditures by Visitors Arriving on Scheduled Airline Flights – The 2013 study estimated that 372,912 visitors arrived in Wyoming annually on commercial airline flights. Annual commercial visitors were estimated at 518,159 in this study. Direct expenditures by commercial visitors have increased from $546.6 million to $844.4 million.

Direct impacts reported in this section set the stage for estimating total annual airport, local, and statewide economic impacts associated with the study airports. As this information shows, economic indicators indicate that the collective contribution of all airports to Wyoming's economy has grown. It is important to note that direct impacts at some study airports, since the 2013 statewide report was released, have declined. In most instances, decreases in economic impact for any individual study airport can be traced to either the loss of business tenants and/or lower average annual capital investment. Lower average annual capital investment is the primary factor contributing to lower direct impacts on an individual airport basis. The next sections of the study show how once direct impacts enter Wyoming's economy or the local economy, served by the individual airport, they continue to grow through indirect and induced multiplier impacts.

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4. Estimates of Indirect/Induced Annual Economic Impacts for Study Airports

4.1 Discussion and Measurement of Indirect/Induced Economic Impacts

Many sectors of Wyoming's economy are linked to study airports. Preceding sections of this report document direct impacts from airport management, business tenants, average annual capital investment, and both categories of air visitor expenditures. This section discusses indirect/induced economic impacts stemming from the previously identified direct impacts. In this report, the two additional impact categories (indirect/induced) are combined to reflect the additional impacts that result from the "multiplier" effect. Indirect impacts result primarily from industries/businesses purchasing from other industries/businesses, whereas induced impacts result primarily from the expenditure of new household income associated with direct and indirect impacts. When summed, direct, indirect, and induced impacts equal total annual economic impacts reported in this study. Subsequent portions of this section provide more information on the model used in this study to estimate the indirect/induced or multiplier impacts.

For this study, all indirect/induced impacts are based on sector specific multipliers that are unique to Wyoming. In the economic modeling process, direct impacts in one sector lead to additional indirect/induced impacts in other sectors of the economy. In the process to estimate indirect/induced impacts, it is important to recognize that there is not just "one" multiplier that is used to estimate how direct impacts in the employment, payroll, and spending categories continue to create additional economic impacts, once they enter the state economy or the local economy. In this analysis, there many multipliers that are considered to estimate indirect/induced impacts reported in this section.

Indirect/induced or multiplier impacts are not the same for all economies. In the economic modeling process, indirect/induced impacts represent or measure opportunities for businesses and individuals to purchase goods and services they need either locally or within the state. The larger and more developed the economy of the area being studied, the greater the chance for purchasing a high percentage of what is needed, resulting in a higher multiplier impact. Local multipliers are often lower than state multipliers, as local economies are often less developed with fewer opportunities for re-circulating direct impacts.

For this study, one state input/output model was developed to measure the total statewide economic impacts resulting from each airport's direct impacts. The state model uses each airport's direct impacts, discussed in **Section 3,** to show how those direct impacts continue to recirculate or multiply within the state economy. In this study, each airport's indirect/induced impacts for airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures were first estimated using the state model.

In addition to the state model, 23 separate "local" input/output models were developed. Using the same direct impacts, each local or county-based model is used to isolate each airport's impact on just its local economy. The local models are developed using county specific socio-economic and demographic conditions that characterize the immediate market area that each airport serves.

Each airport's indirect/induced impacts for each impact category (airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures) are estimated to show total economic impacts on the state economy and similar estimates on just the airport's local economy. Indirect/induced impacts for each airport are almost always be greater using the state model than the airport's corresponding local model which is based on a county-specific economy. Indirect/induced impacts generally reflect the comprehensiveness of the economy being modeled. Goods and services which may not be available for purchase locally may still be available for purchase within the state. Since the state

economy is most often more comprehensive and developed than individual local economies, reported indirect/induced impacts estimated using the state model will in most instances be higher than those generated by the local models.

All indirect/induced and total annual economic impacts discussed in this report are derived from Wyoming-specific state or local input/out models. The data for the models comes from IMPLAN, a proprietary suite of models that has been offered for several decades by a North Carolina-based, privately-owned company. The most current version of IMPLAN for Wyoming and its individual counties is used in this analysis.

IMPLAN is an acronym for **IM**pact analysis for **PLAN**ning; the model was developed almost 40 years ago and is approved by FAA to estimate aviation related economic impacts. IMPLAN is a general input/economic activity model that is comprised of statewide and county specific Wyoming data sets. IMPLAN provides a system to estimate the interdependency between economic sectors, households, and the government in a geographically defined area, using counties as the building blocks for the analysis. One of the most powerful aspects of IMPLAN is that the data sources behind the model are continually improved and updated. Rather than extrapolating state data from national averages, IMPLAN measures economic impacts from data that characterizes actual economies in Wyoming.

IMPLAN tracks all available industry groups in every level of the state's data or the data associated with each county. This permits detailed impact breakdowns and helps ensure accuracy of inter-industry relationships. Some of the data sets used to support the modeling, completed in this economic impact study, include:

- U.S. Bureau of Labor Statistics (BLS) Covered Employment and Wages (CEW) program
- U.S. Bureau of Economic Analysis (BEA) Regional Economic Information System (REA) program
- U.S. Bureau of Economic Analysis Benchmark I/O Accounts of the United States
- BEA Economic Activity estimates
- BLS Consumer Expenditure Survey
- U.S. Census Bureau County Business Patterns (CBP) program
- U.S. Census Bureau Decennial Census and Population Surveys
- U.S. Census Bureau Economic Censuses and Surveys
- U.S. Department of Agriculture Census

An input/economic model estimates additional indirect/induced impacts that result from all direct impacts related to airport and airport-supported employment, payroll, and spending. Indirect/induced impacts are estimated using IMPLAN multipliers. Multipliers vary by direct impact category, and they can vary even within the same category. Also as noted, multipliers that reflect statewide impacts are different than those that reflect only local economic activity.

Within the business tenant category, for example, there are different multipliers for each tenant type. Multipliers for a flight training business, for instance, are not the same as those for an air ambulance operator. In the capital investment category, spending for buildings, asphalt, and equipment all have different multipliers. In the visitor category, each expenditure type, lodging, food, ground transportation, entertainment, and retail all have different multipliers. In the visitor expenditure category, there is a higher economic return to the economy from money spent on hotels, as opposed to retail purchases. Hotels are more likely purchasing a higher percentage of the goods and services that they need to operate within the state or local economy. On the other hand, many retail items purchased by visitors are most likely not made in

Wyoming. Therefore, indirect/induced impacts are higher for spending for hotels than they are for retail purchases.

When visitors arrive at one of the study airports, they often have expenditures for rental cars, lodging, food, entertainment, retail, and other items. These direct expenditures also support direct employment and payroll. As an example of how indirect/induced economic impacts are created, many hotels are, in part, supported by air visitors. Hotels pay for utilities, purchase linens, secure food to supply their restaurant, and buy new carpeting with money paid to them, in part, by the air visitors. In turn, the suppliers of the utilities, linens, food, and carpet also buy "inputs," make payments for salaries, and generate additional economic impacts. The indirect/induced impacts associated with the hotel's operation are examples of how direct impacts (visitor expenditures in this case) associated with study airports generate additional indirect/induced impacts for both the state and local economies.

As a further example of how indirect/induced impacts work, the hotel pays salaries to their employees. In turn, these employees generate their own indirect/induced or multiplier impacts. For example, a hotel employee may use part of his/her income to take his/her family to dinner. Part of this expenditure becomes income to the waiter; he then spends some of his income at the dry cleaners, and part of this expenditure is then used by the owners of the dry-cleaning business to buy materials to renovate their house. Indirect/induced or multiplier impacts continue in the state or local economy until the multiplier impact diminishes to zero.

In the process to estimate indirect/induced economic impacts associated with visitor expenditures, separate model entries are made in both the state and local models for lodging, food, retail, entertainment, and local transportation so that cumulative indirect/induced impacts are more accurately reflected. Similar segmenting of assigned state and local multipliers also takes place in the business tenant and average annual capital investment categories.

The remaining portions of this section present indirect/induced economic impacts estimated using the state IMPLAN model. Since total annual economic impacts in each category are a sum of direct and indirect/induced impacts (related to the multiplier effect), this section also presents total annual economic impacts, as these impacts relate to airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures.

As noted for this economic impact analysis for the Wyoming airports, both a statewide and airport specific local models were used to estimate indirect/induced impacts. Resultant indirect/induced and total annual impacts from the state model are discussed in the following sections. **Appendix A** to this report provides the additional modeling results for each airport generated using the airport's local model. All statewide economic impacts discussed in this section are based on the state model, as opposed to the results that are associated with the 23 individual county level models. All results presented in this section reflect total annual economic impacts for the Wyoming airports and are based on pre-COVID conditions.

4.2 Indirect/Induced and Total Annual Economic Impact from Airport Management at Commercial Service Study Airports

Direct economic impacts for the airport management category (employment, payroll, spending, and annual economic activity) were obtained directly from each study airport. Impacts in this category are those that relate to the day-to-day operation of each airport. Direct economic impacts for airport management are presented in **Table 3-1**. Direct impacts are entered into the state IMPLAN model to estimate total economic impacts and to determine the portion of each airport's airport management related impacts that are indirect/induced (multiplier) impacts.

For the airport management category, **Table 4-1** presents each commercial service airport's direct, indirect/induced, and total annual economic impacts. Impacts shown in **Table 4-1** are based on the state model. Similar impacts for each of the commercial service airports, developed using each commercial airport's local model, are shown in **Table A-1** in **Appendix A**. In these and other tables in this section of the report, annual economic activity is the sum of spending and payroll. As **Table 4-1** reflects, total statewide annual economic impacts in the airport management category for the nine commercial service airports, estimated using the state model, are as follows:

- Employment - 390
- Payroll - $18,483,400
- Spending - $85,815,200
- Economic Activity - $104,298,600

Table 4-1: Direct, Indirect/Induced, and Total Annual Economic Impacts from Airport Management at Commercial Service Study Airports – State Model

FAA ID	Associated City	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
CPR	Casper	Casper - Natrona County International Airport	28	28	56	$1,016,900	$681,300	$1,698,200	$3,260,300	$2,869,100	$6,129,400	$4,277,200	$3,550,400	$7,827,600
CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field	25	24	49	$869,900	$582,800	$1,452,700	$6,548,700	$5,762,800	$12,311,500	$7,418,600	$6,345,600	$13,764,200
COD	Cody	Cody - Yellowstone Regional Airport	13	13	26	$533,900	$357,700	$891,600	$321,800	$283,300	$605,100	$855,700	$641,000	$1,496,700
GCC	Gillette	Gillette - Northeast Wyoming Regional Airport	9	9	18	$630,300	$422,300	$1,052,600	$725,000	$638,000	$1,363,000	$1,355,300	$1,060,300	$2,415,600
JAC	Jackson	Jackson Hole Airport	90	91	181	$5,830,000	$3,906,200	$9,736,200	$27,479,700	$24,182,100	$51,661,800	$33,309,700	$28,088,300	$61,398,000
LAR	Laramie	Laramie Regional Airport	7	7	14	$423,600	$283,900	$707,500	$1,202,600	$1,058,300	$2,260,900	$1,626,200	$1,342,200	$2,968,400
RIW	Riverton	Riverton - Central Wyoming Regional Airport	6	6	12	$546,700	$366,200	$912,900	$276,200	$243,100	$519,300	$822,900	$609,300	$1,432,200
RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport	9	9	18	$746,600	$500,200	$1,246,800	$2,525,000	$2,222,000	$4,747,000	$3,271,600	$2,722,200	$5,993,800
SHR	Sheridan	Sheridan County Airport	8	8	16	$470,000	$314,900	$784,900	$3,307,000	$2,910,200	$6,217,200	$3,777,000	$3,225,100	$7,002,100
		Commercial Service Airports Total	**195**	**195**	**390**	**$11,067,900**	**$7,415,500**	**$18,483,400**	**$45,646,300**	**$40,168,900**	**$85,815,200**	**$56,714,200**	**$47,584,400**	**$104,298,600**

Source: Airport Managers and IMPLAN

4.3 Indirect/Induced and Total Annual Economic Impact from Airport Business Tenants at Commercial Service Study Airports

Direct economic impacts for the business tenant category at the commercial service airports for employment, payroll, spending, and total economic activity are obtained directly from each business tenant, airport representatives, or third-party data sources. Direct impacts in the business tenant category at commercial service airports are presented in **Table 3-2**. Direct impacts are entered into the state IMPLAN model to estimate total economic impacts and to determine the portion of each commercial service airport's business tenant-related impacts that are indirect/induced (multiplier) impacts. There are multiple business tenants at each commercial service study airport, and **Table 4-2** presents the combined impacts of all business tenants at each airport.

For the airport business tenant category, **Table 4-2** presents each commercial service airport's direct, indirect/induced, and total annual economic impacts for employment, payroll, spending, and annual economic activity. Impacts presented in **Table 4-2** are based on the state model; **Table A-2** in **Appendix A** provides a similar estimate based on each commercial service airport's local model. As with other tables in this report, annual economic impact activity is the sum of payroll and spending. It is worth re-stating that the impacts for airport business tenants presented in **Table 4-2** are only for aviation-related businesses at the commercial service airports that have paid employees. For each airport, business tenant-related impacts presented in **Table 4-2** are a sum of all business tenant-related impacts at the specific commercial airport; business tenant-related impacts are not reported for individual tenants.

As **Table 4-2** reflects, total statewide annual economic impacts in the airport business tenant category for just the commercial service airports, developed with the state model, are as follows:

- Employment - 3,346
- Payroll - $154,177,300
- Spending - $284,264,400
- Economic Activity - $438,441,700

4.4 Indirect/Induced and Total Economic Impact for Airport Management and Airport Business Tenants at General Aviation Study Airports

There are many general aviation airports in Wyoming that have more limited economic activity in both the airport management and the airport business tenant categories. In addition, some general aviation airports in the state have some overlap between the management and business tenant functions. As a result, the reporting of economic impacts in the airport management and the business tenant functions for the general aviation airports are combined. Direct annual economic impacts for these two categories for the general aviation study airports were previously reported in **Table 3-1** and **Table 3-2**.

Table 4-3 presents direct, indirect/induced, and total economic impacts for general aviation airports for the airport management and the airport business tenant economic impact categories. Impacts shown in **Table 4-3** are based on the state model; similar impacts, using each airport's applicable local model, are presented in **Table A-3** in **Appendix A**.

As **Table 4-3** reflects, based on the state model, for all general aviation study airports total statewide annual economic impacts in the airport management and business tenant categories are as follows:

- Employment - 327
- Payroll - $18,365,700
- Spending - $37,140,900
- Economic Activity - $55,506,600

Table 4-1: Direct, Indirect/Induced, and Total Economic Impact from Airport Business Tenants at Commercial Service Study Airports – State Model

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
CPR	Casper - Natrona County International Airport	206	123	329	$13,064,000	$9,272,800	$22,336,800	$32,035,800	$13,007,500	$45,043,300	$45,099,800	$22,280,300	$67,380,100
CYS	Cheyenne Regional Airport - Jerry Olson Field	1,040	1,028	2,068	$43,904,900	$29,443,000	$73,347,900	$54,133,900	$45,281,000	$99,414,900	$98,038,800	$74,724,000	$172,762,800
COD	Cody - Yellowstone Regional Airport	88	46	134	$3,813,200	$2,622,400	$6,435,600	$10,750,000	$4,204,900	$14,954,900	$14,563,200	$6,827,300	$21,390,500
GCC	Gillette - Northeast Wyoming Regional Airport	44	30	74	$2,097,000	$1,421,800	$3,518,800	$5,198,400	$2,830,400	$8,028,800	$7,295,400	$4,252,200	$11,547,600
JAC	Jackson Hole Airport	270	122	392	$17,586,300	$11,626,800	$29,213,100	$56,148,200	$21,400,500	$77,548,700	$73,734,500	$33,027,300	$106,761,800
LAR	Laramie Regional Airport	41	37	78	$2,729,700	$1,844,500	$4,574,200	$6,170,200	$4,826,600	$10,996,800	$8,899,900	$6,671,100	$15,571,000
RIW	Riverton - Central Wyoming Regional Airport	41	25	66	$2,117,600	$1,511,500	$3,629,100	$3,977,600	$1,573,200	$5,550,800	$6,095,200	$3,084,700	$9,179,900
RKS	Rock Springs - Southwest Wyoming Regional Airport	35	23	58	$1,819,300	$1,267,700	$3,087,000	$3,187,000	$1,423,700	$4,610,700	$5,006,300	$2,691,400	$7,697,700
SHR	Sheridan County Airport	93	54	147	$4,646,700	$3,388,100	$8,034,800	$12,833,300	$5,282,200	$18,115,500	$17,480,000	$8,670,300	$26,150,300
	Commercial Service Airports Total	**1,858**	**1,488**	**3,346**	**$91,778,700**	**$62,398,600**	**$154,177,300**	**$184,434,400**	**$99,830,000**	**$284,264,400**	**$276,213,100**	**$162,228,600**	**$438,441,700**

Source: Airport Managers, Airport Tenants, and IMPLAN

Table 4-2: Direct, Indirect/Induced, And Total Annual Economic Impact from Airport Management and Airport Business Tenants for General Aviation Study Airports – State Model

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	57	31	88	$2,707,400	$2,025,400	$4,732,800	$8,209,300	$2,950,100	$11,159,400	$10,916,700	$4,975,500	$15,892,200
BYG	Buffalo - Johnson County Airport	4	2	6	$146,200	$107,200	$253,400	$747,000	$363,300	$1,110,300	$893,200	$470,500	$1,363,700
DGW	Douglas - Converse County Airport	2	2	4	$90,000	$66,800	$156,800	$398,700	$209,600	$608,300	$488,700	$276,400	$765,100
EVW	Evanston-Uinta County Airport - Burns Field	5	3	8	$192,600	$139,200	$331,800	$714,500	$337,500	$1,052,000	$907,100	$476,700	$1,383,800
GEY	Greybull - South Big Horn County Airport	16	9	25	$857,000	$638,200	$1,495,200	$922,500	$438,300	$1,360,800	$1,779,500	$1,076,500	$2,856,000
LND	Lander - Hunt Field	21	11	32	$1,296,200	$971,400	$2,267,600	$2,557,800	$916,400	$3,474,200	$3,854,000	$1,887,800	$5,741,800
PNA	Pinedale - Ralph Wenz Field	8	4	12	$401,400	$295,200	$696,600	$855,000	$406,300	$1,261,300	$1,256,400	$701,500	$1,957,900
RWL	Rawlins Municipal Airport - Harvey Field	8	5	13	$460,500	$344,600	$805,100	$866,400	$314,500	$1,180,900	$1,326,900	$659,100	$1,986,000
SAA	Saratoga - Shively Field	6	4	10	$419,900	$314,200	$734,100	$1,367,300	$517,200	$1,884,500	$1,787,200	$831,400	$2,618,600
TOR	Torrington Municipal Airport	6	3	9	$319,100	$235,000	$554,100	$710,200	$356,800	$1,067,000	$1,029,300	$591,800	$1,621,100
WRL	Worland Municipal Airport	21	13	34	$1,198,000	$887,500	$2,085,500	$3,759,100	$1,364,500	$5,123,600	$4,957,100	$2,252,000	$7,209,100
	Business Airports Total	**154**	**87**	**241**	**$8,088,300**	**$6,024,700**	**$14,113,000**	**$21,107,800**	**$8,174,500**	**$29,282,300**	**$29,196,100**	**$14,199,200**	**$43,395,300**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	2	2	4	$71,000	$47,500	$118,500	$86,000	$75,700	$161,700	$157,000	$123,200	$280,200
DUB	Dubois Municipal Airport	1	2	3	$54,100	$39,700	$93,800	$114,400	$58,300	$172,700	$168,500	$98,000	$266,500
FBR	Fort Bridger Airport	1	1	2	$35,800	$24,000	$59,800	$107,100	$94,200	$201,300	$142,900	$118,200	$261,100
GUR	Guernsey - Camp Guernsey Army Airfield	12	13	25	$842,900	$564,700	$1,407,600	$1,052,900	$926,700	$1,979,600	$1,895,800	$1,491,400	$3,387,200
EMM	Kemmerer Municipal Airport	1	1	2	$52,600	$35,200	$87,800	$84,000	$73,900	$157,900	$136,600	$109,100	$245,700
ECS	Newcastle - Mondell Field	2	2	4	$109,800	$81,500	$191,300	$211,400	$96,400	$307,800	$321,200	$177,900	$499,100
82V	Pine Bluffs Municipal Airport	8	3	11	$394,400	$294,200	$688,600	$1,078,200	$431,300	$1,509,500	$1,472,600	$725,500	$2,198,100

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
POY	Powell Municipal Airport	9	5	14	$359,800	$261,100	$620,900	$652,600	$325,200	$977,800	$1,012,400	$586,300	$1,598,700
HSG	Thermopolis - Hot Springs County Airport	7	4	11	$278,500	$208,100	$486,600	$598,400	$289,000	$887,400	$876,900	$497,100	$1,374,000
EAN	Wheatland - Phifer Airfield	<1	1	1	$9,000	$6,000	$15,000	$44,600	$39,200	$83,800	$53,600	$45,200	$98,800
	Intermediate Airports Total	**43**	**34**	**77**	**$2,207,900**	**$1,562,000**	**$3,769,900**	**$4,029,600**	**$2,409,900**	**$6,439,500**	**$6,237,500**	**$3,971,900**	**$10,209,400**
Local Airports													
U68	Cowley - North Big Horn County Airport	1	2	3	$51,100	$37,600	$88,700	$245,300	$143,000	$388,300	$296,400	$180,600	$477,000
DWX	Dixon Airport	3	1	4	$208,400	$154,700	$363,100	$663,700	$258,400	$922,100	$872,100	$413,100	$1,285,200
W43	Hulett Municipal Airport	<1	1	1	$9,500	$6,400	$15,900	$38,400	$33,800	$72,200	$47,900	$40,200	$88,100
LSK	Lusk Municipal Airport	<1	1	1	$9,100	$6,000	$15,100	$19,400	$17,100	$36,500	$28,500	$23,100	$51,600
	Local Airports Total	**4**	**5**	**9**	**$278,100**	**$204,700**	**$482,800**	**$966,800**	**$452,300**	**$1,419,100**	**$1,244,900**	**$657,000**	**$1,901,900**
	General Aviation Airports Total	**201**	**126**	**327**	**$10,574,300**	**$7,791,400**	**$18,365,700**	**$26,104,200**	**$11,036,700**	**$37,140,900**	**$36,678,500**	**$18,828,100**	**$55,506,600**

Source: Airport Managers, Airport Tenants, and IMPLAN

4.5 Indirect/Induced and Total Economic Impacts from Average Annual Capital Investment at Study Airports

Direct economic impacts for the capital investment category for employment, payroll, spending, and annual economic activity are obtained directly from WYDOT, the FAA, airport sponsors, the Wyoming Business Council, and/or third-party private investment sources. Direct impacts for the capital investment category for each study airport are presented in **Table 3-3**. As previously discussed, each airport's average annual capital investment over a 5-year timeframe (2015-2019) is used to determine direct capital investment impacts.

The IMPLAN model is then used to determine the number of jobs the direct average annual capital investment supports. Ratios in IMPLAN show that for every $1 million in capital investment, just under five jobs are supported. Information for the Bureau of Labor Statistics is used to determine average payroll in Wyoming for workers in categories such as engineering and construction; jobs in these categories are supported by airport-related capital investment. Once direct payroll is established, total average annual capital investment, minus payroll, shows the portion of the total capital investment that is actual spending; money used to purchase goods, materials, and supplies for the capital projects.

Direct impacts are entered into the IMPLAN model to estimate total economic impacts and to determine the portion of the annual economic impact from capital investment that is related to indirect/induced (multiplier) impacts.

Using the state model for the capital investment category, **Table 4-4** presents each airport's direct, indirect/induced, and total annual economic impacts for employment, payroll, spending, and annual economic activity. These results consider what has been invested in each airport, on average, over the past five years (generally through 2019). This approach was taken so that smaller airports that complete major projects on a less frequent basis would not be at a disadvantage. Also, considering capital investment over a multi-year period helps to capture the full impact of major projects that often extend over a multi-year period.

Using the same direct average annual capital investment impact for each study airport, **Table A-4** in **Appendix A** shows each airport's total annual economic impact in the average annual capital investment category when each airport's local IMPLAN model is used.

As **Table 4-4** reflects when the state model is used, total statewide annual economic impacts in the average annual capital investment category for all study airports are as follows:

- Employment - 483
- Payroll - $22,358,700
- Spending - $73,714,200
- Economic Activity - $96,072,900

Table 4-1: Direct, Indirect/Induced, and Total Annual Economic Impact from Average Annual Capital Investment at Study Airports – State Model

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Commercial Service Airports													
CPR	Casper - Natrona County International Airport	41	27	68	$1,564,800	$1,126,600	$2,691,400	$6,900,400	$3,933,200	$10,833,600	$8,465,200	$5,059,800	$13,525,000
CYS	Cheyenne Regional Airport - Jerry Olson Field	25	16	41	$1,023,900	$737,200	$1,761,100	$4,089,100	$2,330,700	$6,419,800	$5,113,000	$3,067,900	$8,180,900
COD	Cody - Yellowstone Regional Airport	14	9	23	$536,800	$386,400	$923,200	$2,307,800	$1,315,500	$3,623,300	$2,844,600	$1,701,900	$4,546,500
GCC	Gillette - Northeast Wyoming Regional Airport	10	6	16	$386,900	$278,500	$665,400	$1,622,400	$924,700	$2,547,100	$2,009,300	$1,203,200	$3,212,500
JAC	Jackson Hole Airport	71	46	117	$4,507,000	$3,245,000	$7,752,000	$10,031,400	$5,717,900	$15,749,300	$14,538,400	$8,962,900	$23,501,300
LAR	Laramie Regional Airport	16	11	27	$637,700	$459,200	$1,096,900	$2,707,800	$1,543,400	$4,251,200	$3,345,500	$2,002,600	$5,348,100
RIW	Riverton - Central Wyoming Regional Airport	17	11	28	$626,700	$451,200	$1,077,900	$2,799,200	$1,595,600	$4,394,800	$3,425,900	$2,046,800	$5,472,700
RKS	Rock Springs - Southwest Wyoming Regional Airport	23	15	38	$856,800	$616,900	$1,473,700	$3,827,100	$2,181,400	$6,008,500	$4,683,900	$2,798,300	$7,482,200
SHR	Sheridan County Airport	10	7	17	$402,800	$290,100	$692,900	$1,710,300	$974,900	$2,685,200	$2,113,100	$1,265,000	$3,378,100
	Commercial Service Airports Total	**227**	**148**	**375**	**$10,543,400**	**$7,591,100**	**$18,134,500**	**$35,995,500**	**$20,517,300**	**$56,512,800**	**$46,538,900**	**$28,108,400**	**$74,647,300**
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	1	<1	1	$30,600	$22,000	$52,600	$128,400	$73,100	$201,500	$159,000	$95,100	$254,100
BYG	Buffalo - Johnson County Airport	3	1	4	$99,800	$71,800	$171,600	$440,000	$250,800	$690,800	$539,800	$322,600	$862,400
DGW	Douglas - Converse County Airport	5	4	9	$215,600	$155,200	$370,800	$882,000	$502,700	$1,384,700	$1,097,600	$657,900	$1,755,500
EVW	Evanston-Uinta County Airport - Burns Field	2	2	4	$81,200	$58,400	$139,600	$382,000	$217,700	$599,700	$463,200	$276,100	$739,300
GEY	Greybull - South Big Horn County Airport	3	2	5	$110,000	$79,300	$189,300	$532,100	$303,300	$835,400	$642,100	$382,600	$1,024,700
LND	Lander - Hunt Field	7	4	11	$261,000	$187,900	$448,900	$1,165,900	$664,500	$1,830,400	$1,426,900	$852,400	$2,279,300
PNA	Pinedale - Ralph Wenz Field	5	3	8	$202,600	$145,800	$348,400	$818,800	$466,700	$1,285,500	$1,021,400	$612,500	$1,633,900
RWL	Rawlins Municipal Airport - Harvey Field	2	2	4	$91,000	$65,600	$156,600	$391,300	$223,100	$614,400	$482,300	$288,700	$771,000
SAA	Saratoga - Shively Field	4	3	7	$169,400	$121,900	$291,300	$728,100	$415,100	$1,143,200	$897,500	$537,000	$1,434,500
TOR	Torrington Municipal Airport	2	2	4	$84,000	$60,500	$144,500	$406,400	$231,600	$638,000	$490,400	$292,100	$782,500
WRL	Worland Municipal Airport	1	1	2	$33,300	$24,000	$57,300	$161,100	$91,800	$252,900	$194,400	$115,800	$310,200
	Business Airports Total	**35**	**24**	**59**	**$1,378,500**	**$992,400**	**$2,370,900**	**$6,036,100**	**$3,440,400**	**$9,476,500**	**$7,414,600**	**$4,432,800**	**$11,847,400**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	1	1	2	$42,800	$30,700	$73,500	$172,800	$98,500	$271,300	$215,600	$129,200	$344,800
DUB	Dubois Municipal Airport	3	1	4	$100,800	$72,600	$173,400	$450,300	$256,700	$707,000	$551,100	$329,300	$880,400
FBR	Fort Bridger Airport	1	1	2	$37,900	$27,300	$65,200	$178,400	$101,700	$280,100	$216,300	$129,000	$345,300
GUR	Guernsey - Camp Guernsey Army Airfield	-	-	-	$0	$0	$0	$0	$0	$0	$0	$0	$0
EMM	Kemmerer Municipal Airport	2	1	3	$68,800	$49,500	$118,300	$288,400	$164,400	$452,800	$357,200	$213,900	$571,100
ECS	Newcastle - Mondell Field	5	3	8	$166,000	$119,600	$285,600	$781,500	$445,400	$1,226,900	$947,500	$565,000	$1,512,500
82V	Pine Bluffs Municipal Airport	1	<1	1	$33,400	$24,100	$57,500	$133,400	$76,100	$209,500	$166,800	$100,200	$267,000
POY	Powell Municipal Airport	2	1	3	$62,800	$45,300	$108,100	$270,200	$154,000	$424,200	$333,000	$199,300	$532,300
HSG	Thermopolis - Hot Springs County Airport	3	2	5	$111,000	$80,000	$191,000	$529,700	$302,000	$831,700	$640,700	$382,000	$1,022,700
EAN	Wheatland - Phifer Airfield	9	5	14	$306,200	$220,500	$526,700	$1,441,300	$821,600	$2,262,900	$1,747,500	$1,042,100	$2,789,600

Estimates of Indirect/Induced Annual Economic Impacts for Study Airports

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
	Intermediate Airports Total	**27**	**15**	**42**	**$929,700**	**$669,600**	**$1,599,300**	**$4,246,000**	**$2,420,400**	**$6,666,400**	**$5,175,700**	**$3,090,000**	**$8,265,700**
Local Airports													
U68	Cowley - North Big Horn County Airport	1	1	2	$49,800	$35,800	$85,600	$240,700	$137,200	$377,900	$290,500	$173,000	$463,500
DWX	Dixon Airport	2	1	3	$61,200	$44,100	$105,300	$263,300	$150,000	$413,300	$324,500	$194,100	$518,600
W43	Hulett Municipal Airport	<1	<1	<1	$300	$300	$600	$1,400	$800	$2,200	$1,700	$1,100	$2,800
LSK	Lusk Municipal Airport	1	1	2	$36,400	$26,100	$62,500	$168,900	$96,200	$265,100	$205,300	$122,300	$327,600
	Local Airports Total	**4**	**3**	**7**	**$147,700**	**$106,300**	**$254,000**	**$674,300**	**$384,200**	**$1,058,500**	**$822,000**	**$490,500**	**$1,312,500**
	All Airports Total	**293**	**190**	**483**	**$12,999,300**	**$9,359,400**	**$22,358,700**	**$46,951,900**	**$26,762,300**	**$73,714,200**	**$59,951,200**	**$36,121,700**	**$96,072,900**

Source: WYDOT, FAA, Airport Managers, Airport Tenants Wyoming Business Council, and IMPLAN

4.6 Indirect/Induced and Total Economic Impact from General Aviation Visitor Expenditures at Study Airports

Direct economic impacts for the general aviation visitor spending category for employment, payroll, spending, and annual economic activity were obtained using input from airport operators, WYDOT, FAA NOP and 5010 data, AOPA, and study surveys. Direct impacts from general aviation visitor expenditures are presented in **Table 3-5**.

As previously discussed in this report, the process to estimate general aviation visitors started with each airport. Each airport provided their weekly visiting/transient general aviation aircraft arrivals; the airport estimate was cross-checked using AOPA guidelines for estimating visiting aircraft. Airports also identified the fleet mix for their visiting general aviation aircraft; each airport's operational fleet mix was verified using FAA NOP data. Airports also provided information on their average visitors by plane type. These three inputs (average weekly visiting arrivals, visiting fleet mix, and visitors per plane type) result in an estimate of annual general aviation visitors for each airport. Study surveys are used to estimate average expenditures per visitor per trip for each airport.

Once total annual general aviation visitor expenditures were estimated for each airport, the IMPLAN model is used to determine the number of jobs the expenditures support. Ratios in IMPLAN show that for every $1 million spent in the general aviation visitor category, over 16 jobs are supported. Information on average salaries in Wyoming's hospitality industry from the Bureau of Labor Statistics is used to determine payroll associated with visitor supported employees. Once payroll is determined, it is subtracted from the total expenditures to determine the portion of all visitor expenditures that is non-labor related.

Direct impacts (employment, payroll, and spending) are entered into the IMPLAN model to estimate total economic impacts and to determine the portion of general aviation visitor-related economic impacts that is attributed to indirect/induced (multiplier) impacts. For both general aviation and commercial visitor expenditures, direct visitor expenditures are assigned to one or more of the following categories based on survey results: lodging, food/restaurants, ground transportation, retail, and entertainment.

For the general aviation visitor expenditure category, **Table 4-5** presents each airport's direct, indirect/induced, and total annual economic impacts for employment, payroll, spending, and total annual economic activity, which is the sum of payroll and spending. Impacts presented in **Table 4-5** are based on the state model; **Table A-5** in **Appendix A** presents similar information for each airport using its applicable local IMPLAN model.

As **Table 4-5** reflects based on the state model, total statewide annual economic impacts for general aviation visitor expenditures at all study airports are as follows:

- Employment - 1,669
- Payroll - $57,886,100
- Spending - $57,266,300
- Economic Activity - $115,152,400

Table 4-1: Direct, Indirect/Induced, and Total Annual Economic Impact from General Aviation Visitor Expenditures at Study Airports – State Model

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Commercial Service Airports													
CPR	Casper - Natrona County International Airport	151	41	192	$3,727,700	$1,453,800	$5,181,500	$5,377,700	$2,850,200	$8,227,900	$9,105,400	$4,304,000	$13,409,400
CYS	Cheyenne Regional Airport - Jerry Olson Field	38	10	48	$1,011,900	$394,700	$1,406,600	$1,269,700	$672,900	$1,942,600	$2,281,600	$1,067,600	$3,349,200
COD	Cody - Yellowstone Regional Airport	101	27	128	$2,531,000	$987,100	$3,518,100	$3,525,100	$1,868,400	$5,393,500	$6,056,100	$2,855,500	$8,911,600
GCC	Gillette - Northeast Wyoming Regional Airport	64	17	81	$1,643,800	$641,100	$2,284,900	$2,210,800	$1,171,800	$3,382,600	$3,854,600	$1,812,900	$5,667,500
JAC	Jackson Hole Airport	536	145	681	$22,168,800	$8,645,900	$30,814,700	$10,119,400	$5,363,300	$15,482,700	$32,288,200	$14,009,200	$46,297,400
LAR	Laramie Regional Airport	38	11	49	$972,300	$379,300	$1,351,600	$1,330,800	$705,300	$2,036,100	$2,303,100	$1,084,600	$3,387,700
RIW	Riverton - Central Wyoming Regional Airport	16	5	21	$399,700	$155,800	$555,500	$586,800	$311,000	$897,800	$986,500	$466,800	$1,453,300
RKS	Rock Springs - Southwest Wyoming Regional Airport	76	21	97	$1,866,900	$728,000	$2,594,900	$2,741,200	$1,452,800	$4,194,000	$4,608,100	$2,180,800	$6,788,900
SHR	Sheridan County Airport	78	21	99	$1,985,400	$774,200	$2,759,600	$2,717,200	$1,440,100	$4,157,300	$4,702,600	$2,214,300	$6,916,900
	Commercial Service Airports Total	**1,098**	**298**	**1,396**	**$36,307,500**	**$14,159,900**	**$50,467,400**	**$29,878,700**	**$15,835,800**	**$45,714,500**	**$66,186,200**	**$29,995,700**	**$96,181,900**
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	4	1	5	$107,500	$42,000	$149,500	$144,600	$76,700	$221,300	$252,100	$118,700	$370,800
BYG	Buffalo - Johnson County Airport	5	1	6	$114,600	$44,700	$159,300	$165,300	$87,600	$252,900	$279,900	$132,300	$412,200
DGW	Douglas - Converse County Airport	5	2	7	$136,600	$53,300	$189,900	$177,500	$94,100	$271,600	$314,100	$147,400	$461,500
EVW	Evanston-Uinta County Airport - Burns Field	15	3	18	$339,300	$132,400	$471,700	$535,100	$283,600	$818,700	$874,400	$416,000	$1,290,400
GEY	Greybull - South Big Horn County Airport	1	1	2	$33,700	$13,100	$46,800	$55,000	$29,200	$84,200	$88,700	$42,300	$131,000
LND	Lander - Hunt Field	2	1	3	$49,700	$19,400	$69,100	$73,000	$38,700	$111,700	$122,700	$58,100	$180,800
PNA	Pinedale - Ralph Wenz Field	11	3	14	$282,400	$110,200	$392,600	$360,500	$191,100	$551,600	$642,900	$301,300	$944,200
RWL	Rawlins Municipal Airport - Harvey Field	4	1	5	$102,800	$40,100	$142,900	$143,200	$75,800	$219,000	$246,000	$115,900	$361,900
SAA	Saratoga - Shively Field	138	38	176	$3,483,900	$1,358,800	$4,842,700	$4,852,400	$2,571,700	$7,424,100	$8,336,300	$3,930,500	$12,266,800
TOR	Torrington Municipal Airport	3	<1	3	$60,700	$23,700	$84,400	$99,300	$52,600	$151,900	$160,000	$76,300	$236,300
WRL	Worland Municipal Airport	8	2	10	$177,800	$69,300	$247,100	$290,700	$154,000	$444,700	$468,500	$223,300	$691,800
	Business Airports Total	**196**	**53**	**249**	**$4,889,000**	**$1,907,000**	**$6,796,000**	**$6,896,600**	**$3,655,100**	**$10,551,700**	**$11,785,600**	**$5,562,100**	**$17,347,700**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	2	<1	2	$49,800	$19,400	$69,200	$63,500	$33,700	$97,200	$113,300	$53,100	$166,400
DUB	Dubois Municipal Airport	<1	1	1	$11,900	$4,600	$16,500	$17,400	$9,300	$26,700	$29,300	$13,900	$43,200
FBR	Fort Bridger Airport	1	<1	1	$19,500	$7,600	$27,100	$30,700	$16,300	$47,000	$50,200	$23,900	$74,100
GUR	Guernsey - Camp Guernsey Army Airfield	1	<1	1	$24,700	$9,600	$34,300	$39,000	$20,600	$59,600	$63,700	$30,200	$93,900
EMM	Kemmerer Municipal Airport	2	1	3	$50,900	$19,900	$70,800	$68,500	$36,300	$104,800	$119,400	$56,200	$175,600
ECS	Newcastle - Mondell Field	3	1	4	$68,300	$26,600	$94,900	$107,700	$57,000	$164,700	$176,000	$83,600	$259,600
82V	Pine Bluffs Municipal Airport	<1	<1	<1	$3,500	$1,400	$4,900	$4,400	$2,400	$6,800	$7,900	$3,800	$11,700
POY	Powell Municipal Airport	2	1	3	$58,400	$22,800	$81,200	$81,300	$43,100	$124,400	$139,700	$65,900	$205,600
HSG	Thermopolis - Hot Springs County Airport	2	<1	2	$35,100	$13,700	$48,800	$56,300	$29,900	$86,200	$91,400	$43,600	$135,000
EAN	Wheatland - Phifer Airfield	1	<1	1	$23,000	$8,900	$31,900	$36,200	$19,200	$55,400	$59,200	$28,100	$87,300
	Intermediate Airports Total	**14**	**4**	**18**	**$345,100**	**$134,500**	**$479,600**	**$505,000**	**$267,800**	**$772,800**	**$850,100**	**$402,300**	**$1,252,400**
Local Airports													

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
U68	Cowley - North Big Horn County Airport	1	<1	1	$13,200	$5,100	$18,300	$21,500	$11,400	$32,900	$34,700	$16,500	$51,200
DWX	Dixon Airport	2	1	3	$49,600	$19,300	$68,900	$69,000	$36,600	$105,600	$118,600	$55,900	$174,500
W43	Hulett Municipal Airport	1	1	2	$32,600	$12,700	$45,300	$46,200	$24,500	$70,700	$78,800	$37,200	$116,000
LSK	Lusk Municipal Airport	<1	<1	<1	$7,600	$3,000	$10,600	$11,800	$6,300	$18,100	$19,400	$9,300	$28,700
	Local Airports Total	**4**	**2**	**6**	**$103,000**	**$40,100**	**$143,100**	**$148,500**	**$78,800**	**$227,300**	**$251,500**	**$118,900**	**$370,400**
	All Airports Total	**1,312**	**357**	**1,669**	**$41,644,600**	**$16,241,500**	**$57,886,100**	**$37,428,800**	**$19,837,500**	**$57,266,300**	**$79,073,400**	**$36,079,000**	**$115,152,400**

Source: WYDOT, Airport Managers, Study Surveys, FAA NOP and 5010 Data, Aircraft Owners Pilots Association (AOPA), and IMPLAN

4.7 Indirect/Induced and Total Annual Economic Impact from Commercial Visitor Expenditures at Commercial Service Study Airports

Direct economic impacts for the commercial visitor expenditure category for employment, payroll, spending, and annual economic activity are obtained from WYDOT, visitor surveys, study airports, and USDOT. Direct impacts for commercial visitor expenditures are presented in **Table 3-7.** As previously discussed, a percentage of each commercial airport's annual enplaned passengers are related to visitors, as opposed to residents of the airport's market area. WYDOT provided total 2019 annual enplaned passengers for each commercial service airport. Information for USDOT, for each commercial airport provided by WYDOT, was then used to determine the number of annual enplanements that are visitors versus residents. Study surveys provided information on average spending per visitor per trip for each commercial airport; average visitor expenditures per trip by airport were previously reported in Section 3.

Once total annual commercial visitor expenditures were estimated for each airport, the IMPLAN model is used to determine the number of jobs the expenditures support. Ratios in the IMPLAN model show that for every $1 million spent by commercial visitors, just over 14 jobs are supported. Information on average salaries in Wyoming's hospitality industry from the Bureau of Labor Statistics is used to determine payroll associated with visitor supported employees. Once payroll is determined, it is subtracted from the total expenditures to determine the portion of all visitor expenditures that are non-labor related; this result is reported as visitor spending.

Direct impacts are entered in the state IMPLAN model to estimate total economic impacts and to determine the portion of each airport's commercial visitor expenditure impacts related to indirect/induced (multiplier) impacts. For the commercial visitor expenditure category, **Table 4-6** presents each commercial service airport's direct, indirect/induced, and total annual economic impacts for employment, payroll, spending, and annual economic activity based on the state model. **Table A-6** in **Appendix A** reflects impacts in this category based on each airport's local model.

Impacts in this category are associated with only the commercial service study airports. As **Table 4-6** reflects using the state model, total statewide annual economic impacts from commercial visitor expenditures at just the commercial study airports are as follows:

- Employment - 15,759
- Payroll - $670,473,400
- Spending - $543,756,200
- Economic Activity - $1,214,229,600

Table 4-1: Direct, Indirect, and Total Annual Economic Impact from Commercial Visitor Expenditures at Commercial Service Airports – State Model

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
CPR	Casper - Natrona County International Airport	430	128	558	$10,594,100	$4,131,700	$14,725,800	$19,340,700	$9,670,400	$29,011,100	$29,934,800	$13,802,100	$43,736,900
CYS	Cheyenne Regional Airport - Jerry Olson Field	69	21	90	$1,840,700	$717,800	$2,558,500	$2,960,300	$1,480,100	$4,440,400	$4,801,000	$2,197,900	$6,998,900
COD	Cody - Yellowstone Regional Airport	289	86	375	$7,266,200	$2,833,800	$10,100,000	$12,846,200	$6,423,100	$19,269,300	$20,112,400	$9,256,900	$29,369,300
GCC	Gillette - Northeast Wyoming Regional Airport	116	34	150	$2,972,700	$1,159,400	$4,132,100	$5,091,100	$2,545,500	$7,636,600	$8,063,800	$3,704,900	$11,768,700
JAC	Jackson Hole Airport	10,951	3,285	14,236	$452,944,700	$176,648,500	$629,593,200	$310,193,700	$155,096,900	$465,290,600	$763,138,400	$331,745,400	$1,094,883,800
LAR	Laramie Regional Airport	98	30	128	$2,500,900	$975,300	$3,476,200	$4,351,500	$2,175,800	$6,527,300	$6,852,400	$3,151,100	$10,003,500
RIW	Riverton - Central Wyoming Regional Airport	37	11	48	$909,900	$354,900	$1,264,800	$1,688,200	$844,100	$2,532,300	$2,598,100	$1,199,000	$3,797,100
RKS	Rock Springs - Southwest Wyoming Regional Airport	87	26	113	$2,130,000	$830,800	$2,960,800	$3,952,000	$1,976,000	$5,928,000	$6,082,000	$2,806,800	$8,888,800
SHR	Sheridan County Airport	47	14	61	$1,195,700	$466,300	$1,662,000	$2,080,400	$1,040,200	$3,120,600	$3,276,100	$1,506,500	$4,782,600
	Commercial Service Airports Total	**12,124**	**3,635**	**15,759**	**$482,354,900**	**$188,118,500**	**$670,473,400**	**$362,504,100**	**$181,252,100**	**$543,756,200**	**$844,859,000**	**$369,370,600**	**$1,214,229,600**

Source: WYDOT, Study Airports, USDOT, Study Surveys, and IMPLAN

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5. Total Annual Economic Impact for Each Study Airport

For each of the public commercial service and general aviation study airports with paved runways analyzed in this study, the airport's total annual economic impact is the sum of its applicable impacts from airport management, airport business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures. All total economic impacts for each study airport are the sum of its direct impacts added to its indirect/induced impacts. For this WYDOT study, each airport's indirect/induced impacts are estimated using both a state model and a local model that is specific to each airport's market area. Final statewide impacts reported in this section on based on the state model. Similar impacts for each impact category developed using airport-specific local models are presented in **Appendix A**. All results reported in this section are based on pre-COVID conditions that characterized the study airports.

Table 5-1 provides a summary of each study airport's total annual economic impact; these impacts are based on the state model. **Table 5-1** presents total annual economic impacts (employment, payroll, spending, and annual economic activity) for each of the commercial service or general aviation airport resulting from each of the five applicable economic impact categories considered in this report. Impacts are reported as being either direct, indirect/induced, or total. Total impacts are the sum of all direct and indirect/induced impacts.

Total airport economic impacts shown in **Table 5-1** are estimated using a statewide Wyoming input/output model developed specifically for this analysis. Impacts shown in **Table 5-1** reflect each study airport's total impact on the state economy. **Table A-7** in **Appendix A** present each airport's total applicable economic impacts (direct plus indirect/induced) for airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures generated by local models which are specific to the economy of each airport's market area.

As **Table 5-1** reflects, based on the state model, total statewide annual economic impacts for all impact categories for all study airports are as follows:

- Employment - 21,974
- Payroll - $941,744,600
- Spending - $1,081,957,200
- Economic Activity - $2,023,701,800

Table 5-1: Total Annual Statewide Economic Impact for Each Study Airport

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Commercial Service Airports													
CPR	Casper - Natrona County International Airport	856	347	1,203	$29,967,500	$16,666,200	$46,633,700	$66,914,900	$32,330,400	$99,245,300	$96,882,400	$48,996,600	$145,879,000
CYS	Cheyenne Regional Airport - Jerry Olson Field	1,197	1,099	2,296	$48,651,300	$31,875,500	$80,526,800	$69,001,700	$55,527,500	$124,529,200	$117,653,000	$87,403,000	$205,056,000
COD	Cody - Yellowstone Regional Airport	505	181	686	$14,681,100	$7,187,400	$21,868,500	$29,750,900	$14,095,200	$43,846,100	$44,432,000	$21,282,600	$65,714,600
GCC	Gillette - Northeast Wyoming Regional Airport	243	96	339	$7,730,700	$3,923,100	$11,653,800	$14,847,700	$8,110,400	$22,958,100	$22,578,400	$12,033,500	$34,611,900
JAC	Jackson Hole Airport	11,918	3,689	15,607	$503,036,800	$204,072,400	$707,109,200	$413,972,400	$211,760,700	$625,733,100	$917,009,200	$415,833,100	$1,332,842,300
LAR	Laramie Regional Airport	200	96	296	$7,264,200	$3,942,200	$11,206,400	$15,762,900	$10,309,400	$26,072,300	$23,027,100	$14,251,600	$37,278,700
RIW	Riverton - Central Wyoming Regional Airport	117	58	175	$4,600,600	$2,839,600	$7,440,200	$9,328,000	$4,567,000	$13,895,000	$13,928,600	$7,406,600	$21,335,200
RKS	Rock Springs - Southwest Wyoming Regional Airport	230	94	324	$7,419,600	$3,943,600	$11,363,200	$16,232,300	$9,255,900	$25,488,200	$23,651,900	$13,199,500	$36,851,400
SHR	Sheridan County Airport	236	104	340	$8,700,600	$5,233,600	$13,934,200	$22,648,200	$11,647,600	$34,295,800	$31,348,800	$16,881,200	$48,230,000
	Commercial Service Airports Total	**15,502**	**5,764**	**21,266**	**$632,052,400**	**$279,683,600**	**$911,736,000**	**$658,459,000**	**$357,604,100**	**$1,016,063,100**	**$1,290,511,400**	**$637,287,700**	**$1,927,799,100**
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	62	32	94	$2,845,500	$2,089,400	$4,934,900	$8,482,300	$3,099,900	$11,582,200	$11,327,800	$5,189,300	$16,517,100
BYG	Buffalo - Johnson County Airport	12	4	16	$360,600	$223,700	$584,300	$1,352,300	$701,700	$2,054,000	$1,712,900	$925,400	$2,638,300
DGW	Douglas - Converse County Airport	12	8	20	$442,200	$275,300	$717,500	$1,458,200	$806,400	$2,264,600	$1,900,400	$1,081,700	$2,982,100
EVW	Evanston-Uinta County Airport - Burns Field	22	8	30	$613,100	$330,000	$943,100	$1,631,600	$838,800	$2,470,400	$2,244,700	$1,168,800	$3,413,500
GEY	Greybull - South Big Horn County Airport	20	12	32	$1,000,700	$730,600	$1,731,300	$1,509,600	$770,800	$2,280,400	$2,510,300	$1,501,400	$4,011,700
LND	Lander - Hunt Field	30	16	46	$1,606,900	$1,178,700	$2,785,600	$3,796,700	$1,619,600	$5,416,300	$5,403,600	$2,798,300	$8,201,900
PNA	Pinedale - Ralph Wenz Field	24	10	34	$886,400	$551,200	$1,437,600	$2,034,300	$1,064,100	$3,098,400	$2,920,700	$1,615,300	$4,536,000
RWL	Rawlins Municipal Airport - Harvey Field	14	8	22	$654,300	$450,300	$1,104,600	$1,400,900	$613,400	$2,014,300	$2,055,200	$1,063,700	$3,118,900
SAA	Saratoga - Shively Field	148	45	193	$4,073,200	$1,794,900	$5,868,100	$6,947,800	$3,504,000	$10,451,800	$11,021,000	$5,298,900	$16,319,900
TOR	Torrington Municipal Airport	11	5	16	$463,800	$319,200	$783,000	$1,215,900	$641,000	$1,856,900	$1,679,700	$960,200	$2,639,900
WRL	Worland Municipal Airport	30	16	46	$1,409,100	$980,800	$2,389,900	$4,210,900	$1,610,300	$5,821,200	$5,620,000	$2,591,100	$8,211,100
	Business Airports Total	**385**	**164**	**549**	**$14,355,800**	**$8,924,100**	**$23,279,900**	**$34,040,500**	**$15,270,000**	**$49,310,500**	**$48,396,300**	**$24,194,100**	**$72,590,400**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	5	3	8	$163,600	$97,600	$261,200	$322,300	$207,900	$530,200	$485,900	$305,500	$791,400
DUB	Dubois Municipal Airport	4	4	8	$166,800	$116,900	$283,700	$582,100	$324,300	$906,400	$748,900	$441,200	$1,190,100
FBR	Fort Bridger Airport	3	2	5	$93,200	$58,900	$152,100	$316,200	$212,200	$528,400	$409,400	$271,100	$680,500
GUR	Guernsey - Camp Guernsey Army Airfield	13	13	26	$867,600	$574,300	$1,441,900	$1,091,900	$947,300	$2,039,200	$1,959,500	$1,521,600	$3,481,100
EMM	Kemmerer Municipal Airport	5	3	8	$172,300	$104,600	$276,900	$440,900	$274,600	$715,500	$613,200	$379,200	$992,400
ECS	Newcastle - Mondell Field	10	6	16	$344,100	$227,700	$571,800	$1,100,600	$598,800	$1,699,400	$1,444,700	$826,500	$2,271,200
82V	Pine Bluffs Municipal Airport	9	3	12	$431,300	$319,700	$751,000	$1,216,000	$509,800	$1,725,800	$1,647,300	$829,500	$2,476,800
POY	Powell Municipal Airport	13	7	20	$481,000	$329,200	$810,200	$1,004,100	$522,300	$1,526,400	$1,485,100	$851,500	$2,336,600
HSG	Thermopolis - Hot Springs County Airport	12	6	18	$424,600	$301,800	$726,400	$1,184,400	$620,900	$1,805,300	$1,609,000	$922,700	$2,531,700
EAN	Wheatland - Phifer Airfield	10	6	16	$338,200	$235,400	$573,600	$1,522,100	$880,000	$2,402,100	$1,860,300	$1,115,400	$2,975,700
	Intermediate Airports Total	**84**	**53**	**137**	**$3,482,700**	**$2,366,100**	**$5,848,800**	**$8,780,600**	**$5,098,100**	**$13,878,700**	**$12,263,300**	**$7,464,200**	**$19,727,500**
Local Airports													

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
U68	Cowley - North Big Horn County Airport	3	3	6	$114,100	$78,500	$192,600	$507,500	$291,600	$799,100	$621,600	$370,100	$991,700
DWX	Dixon Airport	7	3	10	$319,200	$218,100	$537,300	$996,000	$445,000	$1,441,000	$1,315,200	$663,100	$1,978,300
W43	Hulett Municipal Airport	1	2	3	$42,400	$19,400	$61,800	$86,000	$59,100	$145,100	$128,400	$78,500	$206,900
LSK	Lusk Municipal Airport	1	2	3	$53,100	$35,100	$88,200	$200,100	$119,600	$319,700	$253,200	$154,700	$407,900
	Local Airports Total	**12**	**10**	**22**	**$528,800**	**$351,100**	**$879,900**	**$1,789,600**	**$915,300**	**$2,704,900**	**$2,318,400**	**$1,266,400**	**$3,584,800**
	All Airports Total	**15,983**	**5,991**	**21,974**	**$650,419,700**	**$291,324,900**	**$941,744,600**	**$703,069,700**	**$378,887,500**	**$1,081,957,200**	**$1,353,489,400**	**$670,212,400**	**$2,023,701,800**

Source: Jviation

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6. Statewide Annual Economic Impacts by Category for All Study Airports

Annual direct, indirect/induced, and total economic impacts are estimated for each of the commercial service and general aviation study airports. Summed, these airport-specific impacts equal total statewide economic impacts for each of the five economic impact categories. Total statewide annual economic impacts for all study airports, by impact category, are summarized in **Table 6-1**, **Table 6-2**, **Table 6-3**, **Table 6-4**, and **Table 6-5**. All impacts summarized in these tables are based on the state IMPLAN model, and all impacts reflect pre-COVID conditions.

Table 6-1: Statewide Annual Economic Impact for Study Airports from Airport Management

Impact Measure	Direct	Indirect/Induced	Total
Employment	213	222	435
Payroll	$11,970,000	$8,019,600	$19,989,600
Spending	$48,254,900	$42,464,100	$90,719,000
Annual Economic Activity	$60,224,900	$50,483,700	$110,708,600

Source: Jviation
Note: Results include the nine commercial service and 25 general aviation study airports

Table 6-2: Statewide Annual Economic Impact for Study Airports from Airport Business Tenants

Impact Measure	Direct	Indirect/Induced	Total
Employment	2,041	1,587	3,628
Payroll	$101,450,900	$69,585,900	$171,036,800
Spending	$207,930,000	$108,571,500	$316,501,500
Annual Economic Activity	$309,380,900	$178,157,400	$487,538,300

Source: Jviation
Note: Results include the nine commercial service and 25 general aviation study airports

Table 6-3: Statewide Annual Economic Impact for Study Airports from Average Annual Capital Investment

Impact Measure	Direct	Indirect/Induced	Total
Employment	293	190	483
Payroll	$12,999,300	$9,359,400	$22,358,700
Spending	$46,951,900	$26,762,300	$73,714,200
Annual Economic Activity	$59,951,200	$36,121,700	$96,072,900

Source: Jviation
Note: Results include the nine commercial service and 25 general aviation study airports

Table 6-4: Statewide Annual Economic Impact for Study Airports from General Aviation Visitor Expenditures

Impact Measure	Direct	Indirect/Induced	Total
Employment	1,312	357	1,669
Payroll	$41,644,600	$16,241,500	$57,886,100
Spending	$37,428,800	$19,837,500	$57,266,300
Annual Economic Activity	$79,073,400	$36,079,000	$115,152,400

Source: Jviation
Note: Results include the nine commercial service and 25 general aviation study airports

Table 6-5: Statewide Annual Economic Impact for Study Airports from Commercial Visitor Expenditures

Impact Measure	Direct	Indirect/Induced	Total
Employment	12,124	3,635	15,759
Payroll	$482,354,900	$188,118,500	$670,473,400
Spending	$362,504,100	$181,252,100	$543,756,200
Annual Economic Activity	$844,859,000	$369,370,600	$1,214,229,600

Source: Jviation
Note: Results include the nine commercial service airports

Table 6-6 presents total annual employment, payroll, spending, and economic activity for all study airports as identified using the state IMPLAN model.

Table 6-6: Statewide Economic Impact from All Impact Categories for All Study Airports

Category	Category	Direct	Indirect/Induced	Total
Employment	Airport Management	213	222	435
	Airport Business Tenants	2,041	1,587	3,628
	Capital Investment	293	190	483
	General Aviation Visitors	1,312	357	1,669
	Commercial Visitors	12,124	3,635	15,759
	Total Employment	**15,983**	**5,991**	**21,974**
Payroll	Airport Management	$11,970,000	$8,019,600	$19,989,600
	Airport Business Tenants	$101,450,900	$69,585,900	$171,036,800
	Capital Investment	$12,999,300	$9,359,400	$22,358,700
	General Aviation Visitors	$41,644,600	$16,241,500	$57,886,100
	Commercial Visitors	$482,354,900	$188,118,500	$670,473,400
	Total Payroll	**$650,419,700**	**$291,324,900**	**$941,744,600**
Spending	Airport Management	$48,254,900	$42,464,100	$90,719,000
	Airport Business Tenants	$207,930,000	$108,571,500	$316,501,500
	Capital Investment	$46,951,900	$26,762,300	$73,714,200
	General Aviation Visitors	$37,428,800	$19,837,500	$57,266,300
	Commercial Visitors	$362,504,100	$181,252,100	$543,756,200
	Total Spending	**$703,069,700**	**$378,887,500**	**$1,081,957,200**
Annual Economic Activity	Airport Management	$60,224,900	$50,483,700	$110,708,600
	Airport Business Tenants	$309,380,900	$178,157,400	$487,538,300
	Capital Investment	$59,951,200	$36,121,700	$96,072,900
	General Aviation Visitors	$79,073,400	$36,079,000	$115,152,400
	Commercial Visitors	$844,859,000	$369,370,600	$1,214,229,600
	Total	**$1,353,489,400**	**$670,212,400**	**$2,023,701,800**

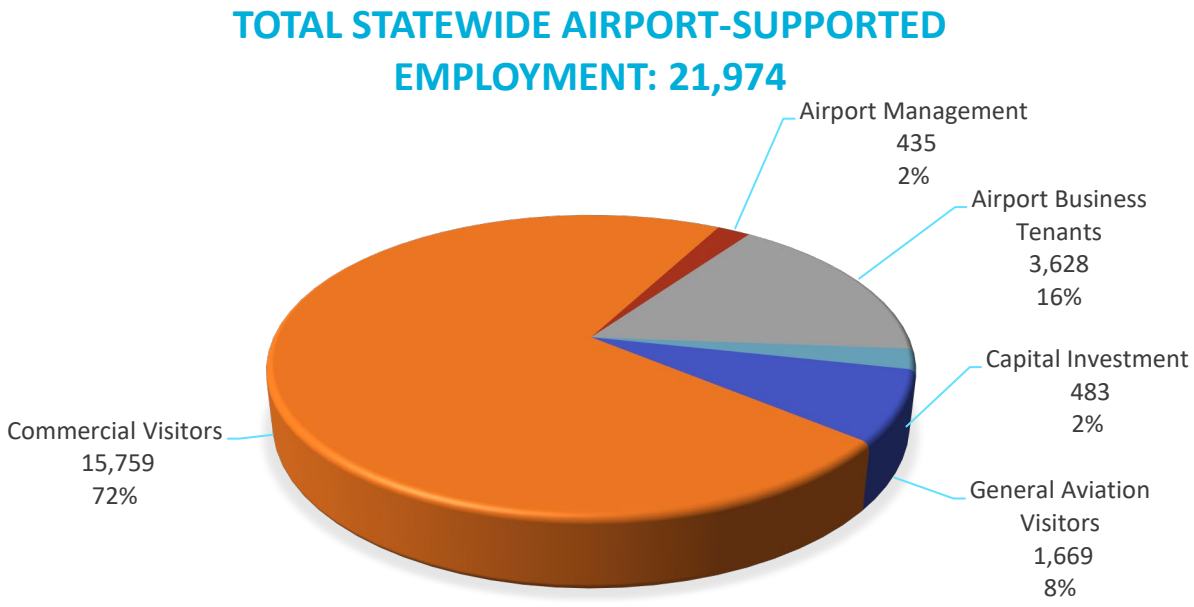
Source: Jviation
Note: Results include the commercial service and general aviation study airports

As shown in **Table 6-6** using the state model, this study estimates the following annual statewide economic impacts for all 34 commercial and general aviation study airports:

- Total Jobs: **21,974**
- Total Annual Payroll: **$941,744,600**
- Total Annual Spending: **$1,081,957,200**
- Total Annual Economic Activity: **$2,023,701,800**

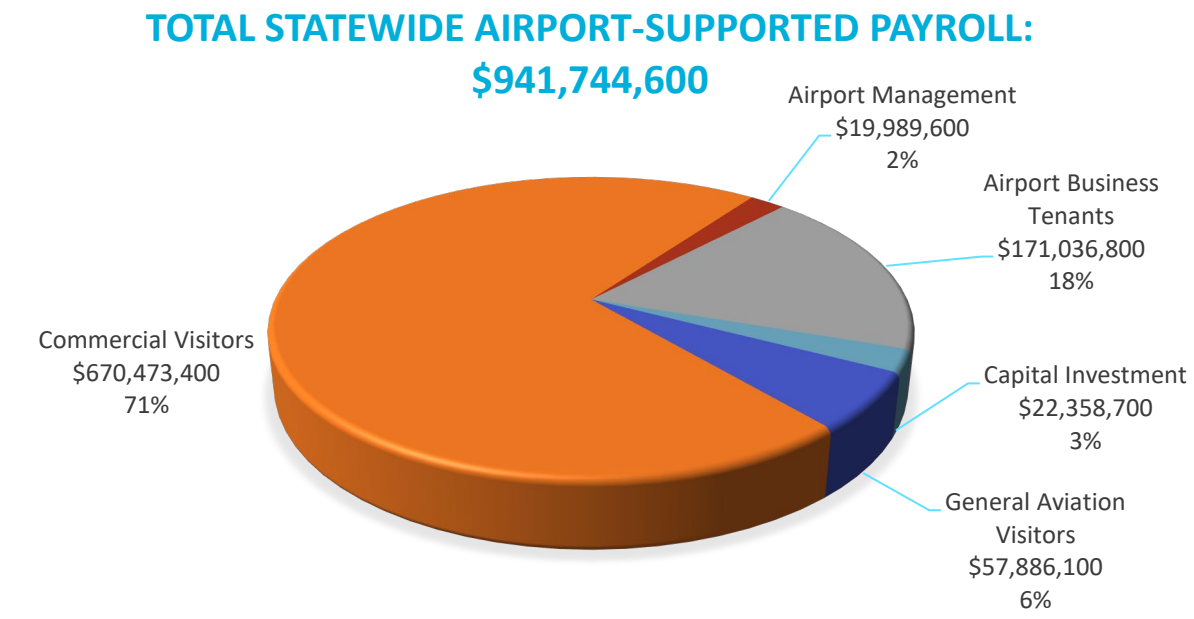
Figure 6-1, **Figure 6-2**, and **Figure 6-3** help summarize the information presented in **Table 6-6.** These figures show the economic contributions associated with each of the economic categories; contributions to total annual statewide employment, payroll, and spending estimated for all study airports are shown in these figures. Information in these figures is based on the state model.

Figure 6-1: Percentage of Statewide Employment Impact by Impact Category for Study Airports



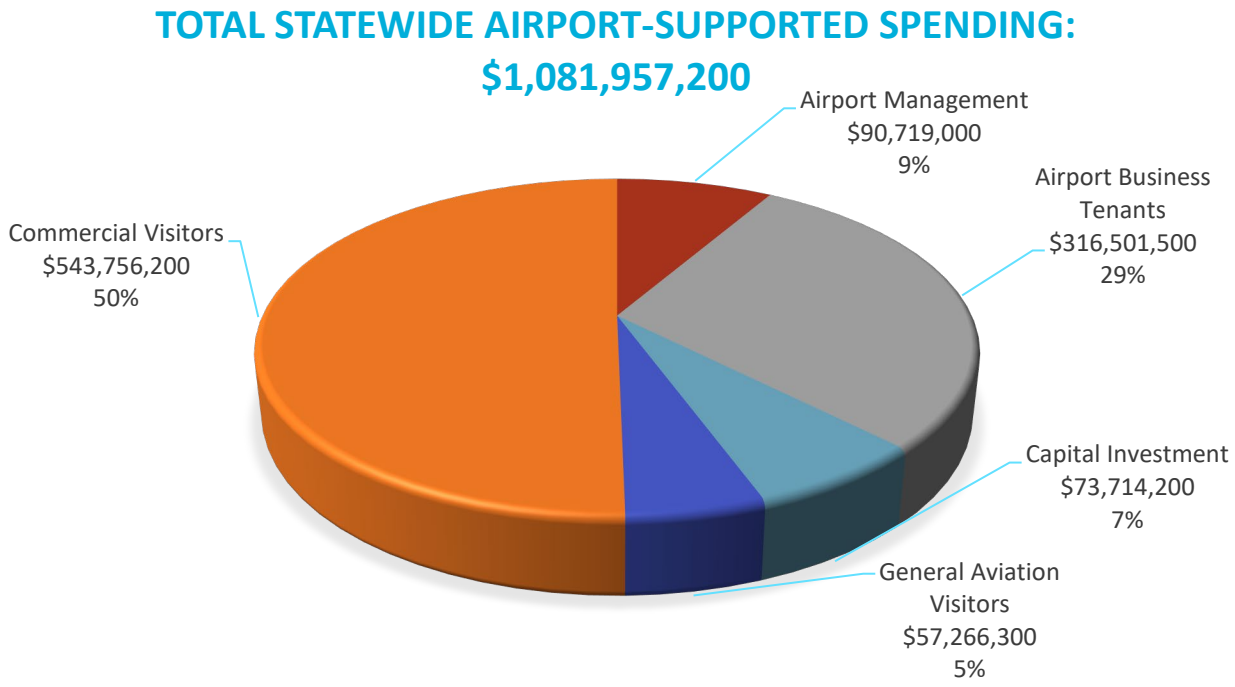
Source: Jviation

Figure 6-2: Percentage of Statewide Payroll Impact by Impact Category for Study Airports



Source: Jviation

Figure 6-3: Percentage of Statewide Spending Impact by Impact Category for Study Airports



Source: Jviation

Using the state model, **Table 6-7** summarizes all impacts (direct plus indirect/induced) from the five impact categories for each airport. This table also shows total impacts for all airports in each of the state role categories; these impacts are based on results generated from the state model. **Table 6-8** aggregates impacts by airport role, as per the results from the state model.

Table 6-7: Total Impacts for All Wyoming Airports – State Model

FAA ID	Airport Name	Total Employment	Total Payroll	Total Spending	Total Annual Economic Activity
Commercial Service Airports					
CPR	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000
CYS	Cheyenne Regional Airport - Jerry Olson Field	2,296	$80,526,800	$124,529,200	$205,056,000
COD	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600
GCC	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900
JAC	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300
LAR	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700
RIW	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200
RKS	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400
SHR	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000
	Commercial Service Airports Total	**21,266**	**$911,736,000**	**$1,016,063,100**	**$1,927,799,100**
Business Airports					
AFO	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100
BYG	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300
DGW	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100
EVW	Evanston-Uinta County Airport - Burns Field	30	$943,100	$2,470,400	$3,413,500
GEY	Greybull - South Big Horn County Airport	32	$1,731,300	$2,280,400	$4,011,700
LND	Lander - Hunt Field	46	$2,785,600	$5,416,300	$8,201,900
PNA	Pinedale - Ralph Wenz Field	34	$1,437,600	$3,098,400	$4,536,000
RWL	Rawlins Municipal Airport - Harvey Field	22	$1,104,600	$2,014,300	$3,118,900
SAA	Saratoga - Shively Field	193	$5,868,100	$10,451,800	$16,319,900
TOR	Torrington Municipal Airport	16	$783,000	$1,856,900	$2,639,900
WRL	Worland Municipal Airport	46	$2,389,900	$5,821,200	$8,211,100
	Business Airports Total	**549**	**$23,279,900**	**$49,310,500**	**$72,590,400**
Intermediate Airports					
BPI	Big Piney - Miley Memorial Field	8	$261,200	$530,200	$791,400
DUB	Dubois Municipal Airport	8	$283,700	$906,400	$1,190,100
FBR	Fort Bridger Airport	5	$152,100	$528,400	$680,500
GUR	Guernsey - Camp Guernsey Army Airfield	26	$1,441,900	$2,039,200	$3,481,100
EMM	Kemmerer Municipal Airport	8	$276,900	$715,500	$992,400
ECS	Newcastle - Mondell Field	16	$571,800	$1,699,400	$2,271,200

FAA ID	Airport Name	Total Employment	Total Payroll	Total Spending	Total Annual Economic Activity
82V	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800
POY	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600
HSG	Thermopolis - Hot Springs County Airport	18	$726,400	$1,805,300	$2,531,700
EAN	Wheatland - Phifer Airfield	16	$573,600	$2,402,100	$2,975,700
	Intermediate Airports Total	**137**	**$5,848,800**	**$13,878,700**	**$19,727,500**
Local Airports					
U68	Cowley - North Big Horn County Airport	6	$192,600	$799,100	$991,700
DWX	Dixon Airport	10	$537,300	$1,441,000	$1,978,300
W43	Hulett Municipal Airport	3	$61,800	$145,100	$206,900
LSK	Lusk Municipal Airport	3	$88,200	$319,700	$407,900
	Local Airports Total	**22**	**$879,900**	**$2,704,900**	**$3,584,800**
	All Airports Total	**21,974**	**$941,744,600**	**$1,081,957,200**	**$2,023,701,800**

Source: Jviation

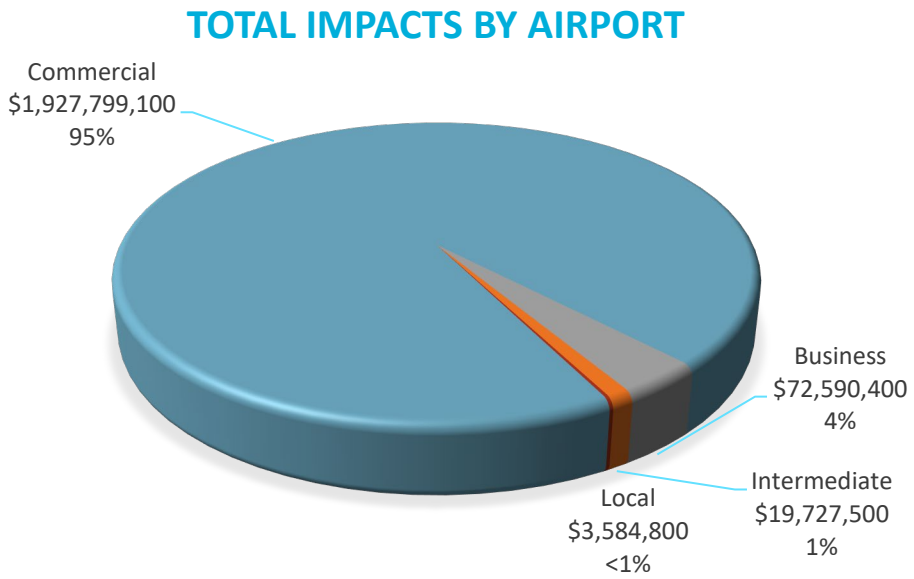
Table 6-8: Summary of Statewide Annual Economic Impact by Airport Role

Study Level	Employment	Payroll	Spending	Annual Economic Activity
Commercial	21,266	$911,736,000	$1,016,063,100	$1,927,799,100
Business	549	$23,279,900	$49,310,500	$72,590,400
Intermediate	137	$5,848,800	$13,878,700	$19,727,500
Local	22	$879,900	$2,704,900	$3,584,800
All Airport Levels	**21,974**	**$941,744,600**	**$1,081,957,200**	**$2,023,701,800**

Source: Jviation

Figure 6-4 illustrates the impacts from all study airports. As this figure shows, Commercial airports account for 95% of the annual economic activity, Business General Aviation airports account for 4% of the annual economic activity, Intermediate airports account for 1% of the annual economic activity, and Local airports account for less than one percent of the annual economic activity identified in this study. These findings are per the state IMPLAN model.

Figure 6-4: Percentage of Statewide Annual Economic Activity by Airport Role



Source: Jviation

This section of Wyoming's State Aviation Economic Impact Study reports on total annual statewide and airport specific economic impacts. As the next section of this report shows, in addition, spending and payroll associated with study airports also are responsible for supporting taxable events that contribute to both state and local sales tax revenues. Estimates of sales tax revenues are based only on direct impacts and do not consider the indirect/induced impacts identified in this section. Statewide and airport specific state and local sales tax revenues are estimated and reported in the following section of this report.

7. Tax Revenue Analysis

This section of WYDOT's Aviation Economic Impact Study estimates annual state and local sales tax revenues state and local governments realize from activity supported by commercial and general aviation airports. Analysis shows study airports and airport-supported activities in Wyoming contribute annually an estimated $87.7 million in sales tax revenues to state and local governments.

As with other aspects of economic impact, multiple rounds of spending can occur, potentially magnifying state and local sales tax receipts and employee sales taxes associated with payroll spending. However, for study purposes, tax receipts collected by state and local government entities are estimated only for direct economic impacts. This conservative approach was taken to prevent overstating tax revenues associated with the study airports.

This discussion of tax revenues focuses on estimated sales tax revenues associated with activity supported by Wyoming's commercial and general aviation airports and with air visitor expenditures while they are in the state. Visitor sales taxes are the largest receipts associated airport activity measured in this analysis.

7.1 Taxable Events for Activities Associated with Wyoming Airports

There are several instances where airports, airport businesses, employees, and visitors engage in taxable events. Tax collections include sales tax on visitor transactions for food, retail purchases, lodging, entertainment, and/or car rentals. Airport management or on-airport business tenants may also have purchases that are subject to sales taxes. Employees hired by the airport, business tenants, or visitor-supported businesses pay sales taxes on individual purchases from wages earned as a result of activities supported by the study airports. **Figure 7-1** summarizes the most important sources of sales tax revenues included in this analysis.

Figure 7-1: Sources of Aviation-related Sales Tax Revenues

Source: KRAMER aerotek, inc.

A bottom-up approach was taken to estimate all airport-supported tax contributions. These calculations included the following:

- **Sales tax on goods and services purchased by airports and airport business tenants.** Each year, airport management and airport business tenants have purchases that are necessary for them to operate.
- **Sales tax on spending to support the implementation of capital projects.** This includes purchases of goods, materials, and supplies needed to implement capital improvement projects.

- **Sales tax paid by employees in Wyoming whose jobs are supported by the airports or airport-related activities.** All airport associated employees use part of their income (payroll) each year on expenditures that are subject to sales tax.
- **Sales tax paid by visitors to Wyoming.** When visitors come to Wyoming on commercial airline flights or on general aviation aircraft, they often have expenditures for lodging, food, rental cars, retail purchases, and entertainment. These purchases are subject to various taxes.

7.2 Structure of Wyoming's Sales Tax

7.2.1 State Sales Tax

The State of Wyoming imposes a four percent sales tax on the sale price of tangible personal property and specified taxable services sold in Wyoming. For items purchased outside the state for predominant use within Wyoming, a use tax is imposed with tax rates that are similar to the state sales tax. The four percent sales tax applies to each purchase made, with some exemptions for certain services, groceries, and prescription drugs. Wyoming Statute 39-15-105 lists all sales tax exemptions.

Sales tax revenue is a major source of funding for state and local governments. Of the total revenue collected by the state's four percent sales tax, 69 percent goes into the General Fund to support the functions of state government. The remaining 31 percent of proceeds are returned to the counties where the sales transaction occurred. The county then distributes these proceeds based on percentage of population in each local jurisdiction within the county.

7.2.2 Optional General-Purpose Sales Tax

While the four percent statewide sales tax applies to all jurisdictions, Wyoming counties can also, by voter approval, add additional sales tax in increments of half a percent up to two percent. These additional taxes can be used for capital projects or to cover operating expenses at the discretion of the county or municipal government. This tax is often referred to as the "5th penny." This tax, along with the statewide four percent sales tax, is collected at the point-of-sale; however, the redistribution formula for the 5th penny is different. The state keeps one percent of 5th penny revenues and redistributes 99 percent of the optional general sales tax back to the local county. Counties distribute this revenue based on the population of local jurisdictions.

The 5th penny sales tax requires voter approval when first enacted and remains in place for four years. After four years, it can be continued by resolution of local governing bodies within each county or it can be put to a vote by county residents again. All counties, except Park and Sublette, levy the 5th penny sales tax. Those counties that levy a general-purpose sales tax maintain the tax at one percent.

7.2.3 Optional Special Purpose Sales Tax

A third sales tax is an optional special purpose sales tax intended to fund a specific capital need within a county or municipality. The "6th penny" sales tax always requires voter approval and exists for a specific amount of time required to construct, expand, or renovate an existing or new facility or infrastructure. For example, building a bridge, renovating a local public building, or replacing water lines would each be considered a special capital project. Paying for standard programs or regular county/municipal government operations is not eligible for this special purpose tax. The 6th penny sales tax also has a specific revenue target; once this targeted amount of revenue is collected, the tax goes away. The 6th penny tax can be up to two percent. However, both optional sales taxes (general purpose and special purpose) cannot exceed three percent in total.

7.2.4 Economic Development Tax

This tax allows local jurisdictions to impose an economic development tax in increments of a quarter percent up to one percent to provide for economic development. Goshen County is the only jurisdiction to have passed a quarter percent economic development tax.

7.2.5 Lodging Tax

Counties and cities can levy a lodging tax in increments of one percent up to four percent of the cost of guest accommodations. Lodging taxes are approved by voters in local jurisdictions and are added to the state and local sales tax rates that apply.

7.2.6 Rental Car Tax Rates

Visitors using rental cars pay a sales tax on the cost of rented vehicles. This sales tax is the aggregate of the state's four percent sales tax plus any general purpose, special purpose, or economic develop tax that is in effect for the local jurisdiction.

In addition, car rentals may also include other fees and charges such as concession fees or energy recovery fees. These are additional costs for the renter, but they are not part of the basis for the calculation of sales tax in this analysis.

Table 7-1 shows Wyoming sales tax rates (2019) that were used for this tax analysis.

Table 7-1: Wyoming Sales Tax Rates 2019

FAA ID	Role	County	Airport	State Tax	General Purpose	Specific Purpose	Economic Development	Total Sales & Use Tax	Lodging	Total Lodging Tax	Rental Car Surcharge	Total Rental Car Tax
LAR	Commercial	Albany	Laramie Regional Airport	4%	1%	1%		6%	4%	10%	4%	10%
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional Airport	4%	1%			5%	2%	7%	4%	9%
RIW	Commercial	Fremont	Riverton - Central Wyoming Regional Airport	4%	1%			5%	4%	9%	4%	9%
CYS	Commercial	Laramie	Cheyenne Regional Airport - Jerry Olson Field	4%	1%	1%		6%	4%	10%	4%	10%
CPR	Commercial	Natrona	Casper - Natrona County International Airport	4%	1%			5%	4%	9%	4%	9%
COD	Commercial	Park	Cody - Yellowstone Regional Airport	4%	0%			4%	4%	8%	4%	8%
SHR	Commercial	Sheridan	Sheridan County Airport	4%	1%	1%		6%	4%	10%	4%	10%
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional Airport	4%	1%			5%	4%	9%	4%	9%
JAC	Commercial	Teton	Jackson Hole Airport	4%	1%	1%		6%	2%	8%	4%	10%
GEY	Business	Big Horn	Greybull - South Big Horn County Airport	4%	1%			5%	3%	8%	4%	9%
RWL	Business	Carbon	Rawlins Municipal Airport - Harvey Field	4%	1%	1%		6%	2%	8%	4%	10%
SAA	Business	Carbon	Saratoga - Shively Field	4%	1%	1%		6%	2%	8%	4%	10%
DGW	Business	Converse	Douglas - Converse County Airport	4%	1%			5%	3%	8%	4%	9%
LND	Business	Fremont	Lander - Hunt Field	4%	1%			5%	4%	9%	4%	9%
TOR	Business	Goshen	Torrington Municipal Airport	4%	1%		0.25%	5.25%	4%	9%	4%	9.25%
BYG	Business	Johnson	Buffalo - Johnson County Airport	4%	1%	1%		6%	2%	8%	4%	10%
AFO	Business	Lincoln	Afton - Lincoln County Municipal Airport	4%	1%			5%	3%	8%	4%	9%
PNA	Business	Sublette	Pinedale - Ralph Wenz Field	4%				4%	4%	8%	4%	8%
EVW	Business	Uinta	Evanston-Uinta County Airport - Burns Field	4%	1%			5%	3%	8%	4%	9%
WRL	Business	Washakie	Worland Municipal Airport	4%	1%			5%	4%	9%	4%	9%
DUB	Intermediate	Fremont	Dubois Municipal Airport	4%	1%			5%	4%	9%	4%	9%
HSG	Intermediate	Hot Springs	Thermopolis - Hot Springs County Airport	4%	1%	1%		6%	4%	10%	4%	10%
82V	Intermediate	Laramie	Pine Bluffs Municipal Airport	4%	1%	1%		6%	4%	10%	4%	10%
EMM	Intermediate	Lincoln	Kemmerer Municipal Airport	4%	1%			5%	4%	9%	4%	9%
POY	Intermediate	Park	Powell Municipal Airport	4%				4%	4%	8%	4%	8%
GUR	Intermediate	Platte	Guernsey - Camp Guernsey Army Airfield	4%	1%	1%		6%	3%	9%	4%	10%
EAN	Intermediate	Platte	Wheatland - Phifer Airfield	4%	1%	1%		6%	3%	9%	4%	10%
BPI	Intermediate	Sublette	Big Piney - Miley Memorial Field	4%				4%	0%	4%	4%	8%
FBR	Intermediate	Uinta	Fort Bridger Airport	4%	1%			5%	0%	5%	4%	9%
ECS	Intermediate	Weston	Newcastle - Mondell Field	4%	1%	1%		6%	4%	10%	4%	10%
U68	Local	Big Horn	Cowley - North Big Horn County Airport	4%	1%			5%	0%	5%	4%	9%
DWX	Local	Carbon	Dixon Airport	4%	1%	1%		6%	2%	8%	4%	10%
W43	Local	Crook	Hulett Municipal Airport	4%	1%			5%	4%	9%	4%	9%
LSK	Local	Niobrara	Lusk Municipal Airport	4%	1%	1%		6%	3%	9%	4%	10%

Source: Wyoming Department of Revenue, 2020

7.3 Methodology to Estimate Individual Airport Tax Impacts

Sales tax estimates were developed for each Wyoming airport; these relied on spending and payroll data developed in other parts of this economic impact study. Section 3 of this report provides information on direct impacts that support the tax revenue analysis. Three separate methodologies were used to determine each of the following:

1. Sales tax revenues attributable to airport management, business tenants, and capital investment spending
2. Sales tax revenues attributable to commercial service and general aviation visitor expenditures
3. Sales tax revenues attributable to airport-supported employee spending

Each methodology is described briefly in the following sections.

7.3.1 Airport Management, Tenant, and Capital Investment Sale Tax Revenues

Airport economic impact studies estimate jobs, payroll, and the spending associated with airport management, tenants (aviation businesses) at airports, and capital improvement projects at the airports. Section 3 describes how direct impacts were calculated and presents direct impacts by airport.

An airport's applicable sales tax rate is applied to the estimated annual taxable spending for airport management, business tenants, and capital investment projects, using the following generalized formula:

Sales Taxes = (Annual Spending x Sales Tax Rate)/ (1 + Sales Tax Rate)

7.3.2 Visitor Spending Sales Tax Revenue

Considerable effort went into surveying visitors using Wyoming's airports to track expenditure patterns for lodging, food, retail purchases, ground transportation, and entertainment. Wyoming sales tax, state and local, applies to each of these expenditure categories. Visitor expenditures were estimated by airport separately for commercial visitors and general aviation visitors. Section 3 provides information on direct commercial and general aviation visitor expenditures for each airport.

Tax rates were applied to estimates for each category of visitor spending, using the following generalized formula:

Sales Taxes = (Visitor Expenditures by Category x Sales Tax Rate) / (1 + Sales Tax Rate)

7.3.3 Employee Spending Sales Tax Revenues

Employees that work as airport staff, for business tenant establishments, or for companies engaged in on-airport capital projects use a portion of their salary for purchases that are subject to sales tax. In the same way, employees that provide services to air visitors using hotels, restaurants, retail stores, entertainment venues, and ground transportation also are making purchases in the state with their airport-related income that are subject to sales tax. Estimated sales tax revenues from this group involves a multi-step calculation.

- **Step 1**: Estimate average income for each category of employees
- **Step 2**: Estimate sales tax paid per employee using the IRS Sales Tax Calculator which incorporates local sales tax rates and average spending by income bracket

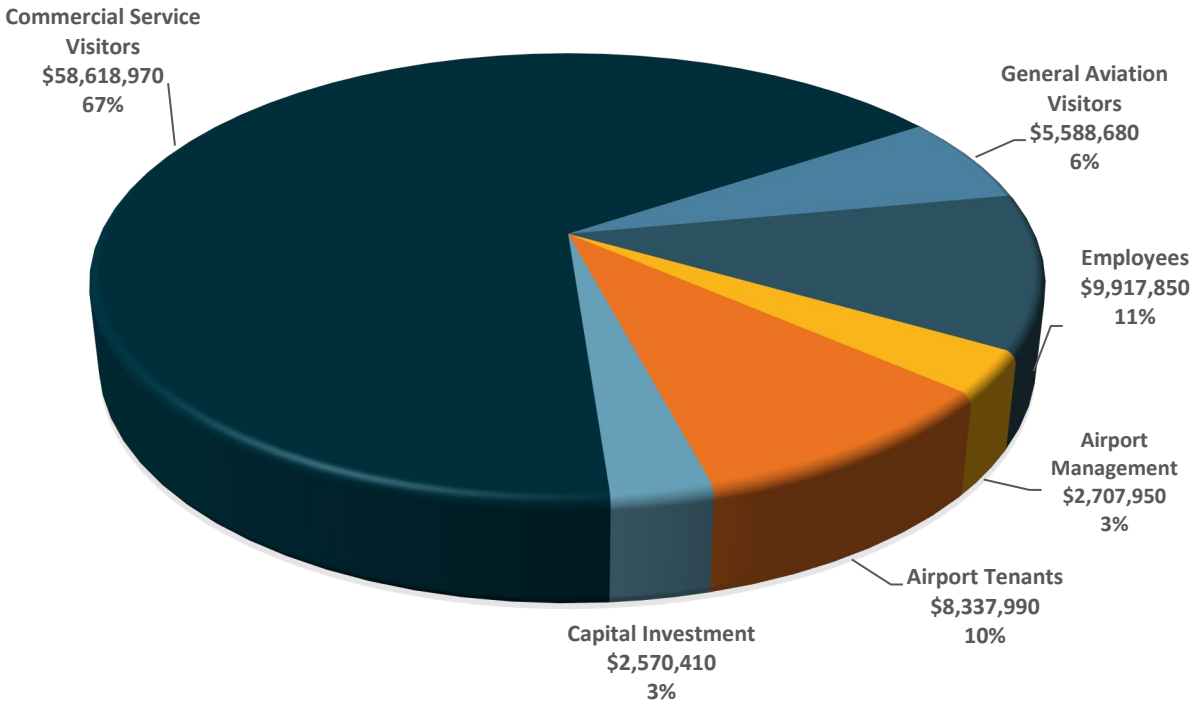
- **Step 3**: Multiply the IRS sales tax estimate per employee times the number of direct employees in each category
- **Step 4**: Estimate total sales tax for all employees associated with all categories

7.4 Tax Analysis Results

Direct aviation activity, not considering multiplier impacts, contributes an estimated $87.7 million of annual sales tax revenue in Wyoming. Two-thirds of this revenue is generated by visitors arriving on scheduled commercial airline flights; this finding underscores the importance of tourism to the state. Some visitor spending takes place at the airport, but most taxable events occur with expenditures for lodging and food.

Figure 7-2 highlights the contributions to sales tax made by each group engaged in aviation-related activities considered in this analysis. Together general aviation and commercial service visitors contribute 73 percent of all sale tax revenue identified in this analysis. Airport tenants and employees contribute 10 percent and 11 percent, respectively.

Figure 7-2: Direct Sales Tax Contributions by Category



Source: Wyoming Department of Revenue, Jviation, and KRAMER aerotek inc.

Table 7-2 shows sales tax generated by activity at commercial service and general aviation airports. Commercial service airports account for 97 percent of all tax revenue generation. **Table 7-3** delves deeper into the sources of sales tax revenue for visitor and employee expenditures that are subject to sales tax. The amount of sales tax generated in each category is directly related to the number of jobs (and average payroll) in each category, as **Figure 7-3** shows. In total, Wyoming airports support almost 16,000 direct jobs. Visitors arriving by air either on privately-owned general aviation aircraft or on commercial airline flights support over 13,400 of these direct jobs or 76% of all direct jobs. Some airport tenant jobs also support visitor activity.

Table 7-2: Sales Taxes Generated by Study Airports

Sales Taxes Generated by:	Airports		All Airports
	Commercial	General Aviation	
Airport Management	$2,578,480	$129,470	$2,707,950
Tenants	$7,211,220	$1,126,770	$8,337,990
Capital Investment	$1,966,910	$603,500	$2,570,410
Commercial Service Visitors	$58,618,970	$0	$58,618,970
General Aviation Visitors	$4,722,500	$866,180	$5,588,680
Employees	$9,676,780	$241,070	$9,917,850
Total	**$84,774,860**	**$2,966,990**	**$87,741,850**
Percent	**97%**	**3%**	**100%**

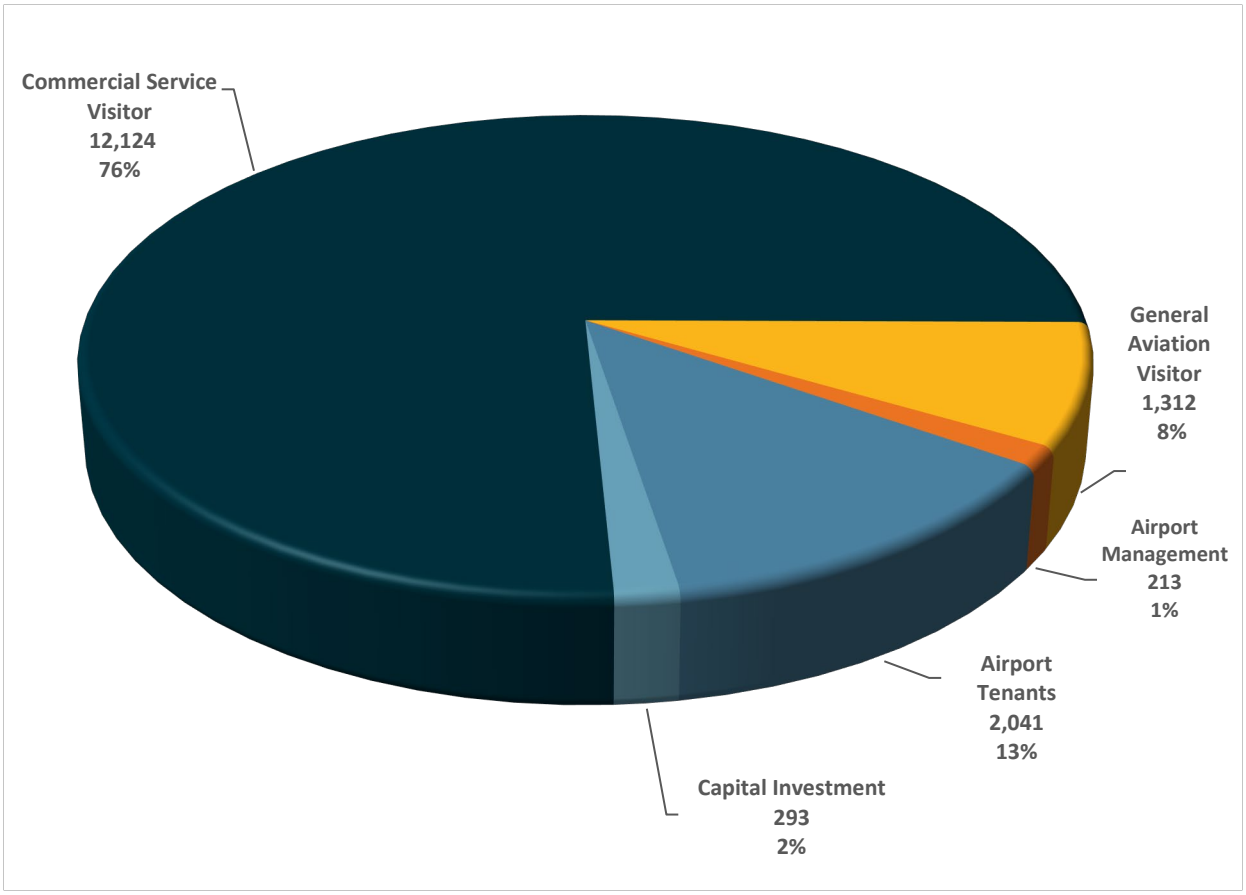
Source: Wyoming Department of Revenue, Jviation, and KRAMER aerotek inc.

Table 7-3: Detail of Sales Tax Revenues

	Estimated Tax Revenue	% of Total
Airport Management	**$2,707,950**	**3%**
Airport Business Tenants	**$8,337,990**	**10%**
Capital Investment	**$2,570,410**	**3%**
Commercial Service Visitors		
Hotel/Lodging	$29,300,940	33%
Food/Restaurant	$12,724,390	15%
Ground Transportation	$5,821,230	7%
Retail	$2,046,220	2%
Entertainment	$7,797,700	9%
Other	$928,490	1%
Subtotal	**$58,618,970**	**67%**
General Aviation Visitors		
Hotel/Lodging	$2,994,260	3%
Food/Restaurant	$911,290	1%
Ground Transportation	$1,264,310	1%
Retail	$210,790	0%
Entertainment	$208,030	0%
Subtotal	**$5,588,680**	**6%**
Employees		
Airport Employees	$143,500	0%
Business Tenant Employees	$1,334,010	2%
Employees Supporting Capital Investment	$169,240	0%
Employees Supporting Commercial Visitors	$7,600,610	9%
Employees Supporting General Aviation Visitors	$670,490	0%
Subtotal	**$9,917,850**	**11%**
Grand Total	**$87,741,850**	**100%**

Source: Wyoming Department of Revenue, Jviation, and KRAMER aerotek inc.

Figure 7-3: Direct Employment Related to Aviation-Related Activities



Source: Wyoming Department of Revenue, Jviation, and KRAMER aerotek inc.

7.5 Sales Tax Revenues for Each Study Airport

Table 7-4, **Table 7-5**, and **Table 7-6** detail estimated state and local sales tax revenues associated with each Wyoming airport. Jackson Hole Airport contributes almost 78 percent of all sales tax revenues and speaks to its contribution to state tourism. Casper/Natrona County International Airport is the second largest contributor to sales tax revenues reflecting its importance as a regional center in the state for commerce, banking, and healthcare.

Table 7-4: Estimated Direct State and Local Sales Taxes Supported by Airport Management, Business Tenants, Capital Investment, and All Visitor Activity at Study Airports

				Estimated Direct State and Local Sales Taxes Paid by Airports, Tenants, CIP, and Visitors					
FAA ID	Role	County	Airport	Airport Management	Tenants	CIP (Construction)	Commercial Service Visitors	General Aviation Visitors	Total Employer Sales Tax
CPR	Commercial	Natrona	Casper - Natrona County International Airport	$157,680	$1,549,330	$338,950	$2,356,120	$649,990	$5,052,070
CYS	Commercial	Laramie	Cheyenne Regional Airport - Jerry Olson Field	$380,280	$286,510	$243,310	$400,310	$182,380	$1,492,790
COD	Commercial	Park	Cody - Yellowstone Regional Airport	$12,380	$413,460	$93,080	$1,329,790	$379,600	$2,228,310
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional Airport	$35,060	$251,410	$85,820	$566,880	$242,120	$1,181,290
JAC	Commercial	Teton	Jackson Hole Airport	$1,595,730	$3,260,490	$596,060	$52,449,840	$2,309,050	$60,211,170
LAR	Commercial	Albany	Laramie Regional Airport	$69,830	$358,300	$163,260	$561,700	$184,100	$1,337,190
RIW	Commercial	Fremont	Riverton - Central Wyoming Regional Airport	$13,360	$192,370	$145,260	$180,650	$70,430	$602,070
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional Airport	$122,120	$154,130	$194,280	$488,750	$328,950	$1,288,230
SHR	Commercial	Sheridan	Sheridan County Airport	$192,040	$745,220	$106,890	$284,930	$375,880	$1,704,960
			Total Commercial	**$2,578,480**	**$7,211,220**	**$1,966,910**	**$58,618,970**	**$4,722,500**	**$75,098,080**
AFO	Business	Lincoln	Afton - Lincoln County Municipal Airport	$7,010	$390,010	$9,940		$16,190	$423,150
BYG	Business	Johnson	Buffalo - Johnson County Airport	$11,150	$32,230	$30,530		$19,330	$93,240
DGW	Business	Converse	Douglas - Converse County Airport	$6,390	$12,890	$42,650		$20,180	$82,110
EVW	Business	Uinta	Evanston-Uinta County Airport - Burns Field	$7,980	$26,580	$21,670		$56,170	$112,400
GEY	Business	Big Horn	Greybull - South Big Horn County Airport	$10,540	$34,070	$25,740		$5,700	$76,050
LND	Business	Fremont	Lander - Hunt Field	$1,930	$121,770	$59,020		$8,350	$191,070
PNA	Business	Sublette	Pinedale - Ralph Wenz Field	$7,760	$25,120	$32,500		$38,130	$103,510
RWL	Business	Carbon	Rawlins Municipal Airport - Harvey Field	$1,240	$49,070	$23,320		$17,010	$90,640
SAA	Business	Carbon	Saratoga - Shively Field	$4,220	$75,180	$45,080		$576,010	$700,490
TOR	Business	Goshen	Torrington Municipal Airport	$10,380	$25,700	$21,650		$11,240	$68,970
WRL	Business	Washakie	Worland Municipal Airport	$4,460	$177,340	$11,850		$31,890	$225,540
BPI	Intermediate	Sublette	Big Piney - Miley Memorial Field	$3,310	$0	$6,830		$4,730	$14,870
DUB	Intermediate	Fremont	Dubois Municipal Airport	$1,670	$3,860	$22,770		$1,800	$30,100
FBR	Intermediate	Uinta	Fort Bridger Airport	$5,180	$0	$8,630		$2,550	$16,360
GUR	Intermediate	Platte	Guernsey - Camp Guernsey Army Airfield	$4,420	$0	$120		$4,300	$8,840
EMM	Intermediate	Lincoln	Kemmerer Municipal Airport	$4,060	$0	$15,510		$7,320	$26,890
ECS	Intermediate	Weston	Newcastle - Mondell Field	$2,460	$9,810	$45,380		$12,320	$69,970
82V	Intermediate	Laramie	Pine Bluffs Municipal Airport	$5,920	$56,690	$7,770		$560	$70,940
POY	Intermediate	Park	Powell Municipal Airport	$7,030	$18,070	$12,000		$7,310	$44,410
HSG	Intermediate	Hot Springs	Thermopolis - Hot Springs County Airport	$8,710	$26,040	$30,910		$6,400	$72,060
EAN	Intermediate	Platte	Wheatland - Phifer Airfield	$2,590	$0	$92,050		$3,990	$98,630

Table 7-4: Estimated Direct State and Local Sales Taxes Supported by Airport Management, Business Tenants, Capital Investment, and All Visitor Activity at Study Airports

				Estimated Direct State and Local Sales Taxes Paid by Airports, Tenants, CIP, and Visitors					
FAA ID	Role	County	Airport	Airport Management	Tenants	CIP (Construction)	Commercial Service Visitors	General Aviation Visitors	Total Employer Sales Tax
U68	Local	Big Horn	Cowley - North Big Horn County Airport	$5,220	$6,640	$11,640		$1,710	$25,210
DWX	Local	Carbon	Dixon Airport	$2,850	$35,700	$15,290		$7,320	$61,160
W43	Local	Crook	Hulett Municipal Airport	$1,860	$0	$70		$4,430	$6,360
LSK	Local	Niobrara	Lusk Municipal Airport	$1,130	$0	$10,580		$1,240	$12,950
			Total General Aviation	**$129,470**	**$1,126,770**	**$603,500**	**$0**	**$866,180**	**$2,725,920**
			Totals	**$2,707,950**	**$8,337,990**	**$2,570,410**	**$58,618,970**	**$5,588,680**	**$77,824,000**

Source: Jviation and KRAMER aerotek inc.

Table 7-5: Estimated Direct State and Local Sales Taxes Paid by Employees Associated with Airport-supported Activities at Study Airports

				Estimated Direct State and Local Sales Taxes Paid by Aviation or Visitor Employees					
FAA ID	Role	County	Airport	Airport Employees	Tenant Employees	CIP (Construction) Employees	Commercial Service Visitor Employee	General Aviation Visitor Employees	Total Employee Sales Tax
CPR	Commercial	Natrona	Casper - Natrona County International Airport	$13,380	$134,400	$19,710	$172,690	$60,760	$400,940
CYS	Commercial	Laramie	Cheyenne Regional Airport - Jerry Olson Field	$14,040	$676,710	$16,210	$33,280	$18,290	$758,530
COD	Commercial	Park	Cody - Yellowstone Regional Airport	$5,990	$40,680	$5,620	$98,710	$34,380	$185,380
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional Airport	$6,320	$23,850	$4,680	$46,520	$25,720	$107,090
JAC	Commercial	Teton	Jackson Hole Airport	$70,760	$211,880	$55,510	$7,129,130	$348,930	$7,816,210
LAR	Commercial	Albany	Laramie Regional Airport	$5,290	$31,950	$9,340	$47,490	$18,470	$112,540
RIW	Commercial	Fremont	Riverton - Central Wyoming Regional Airport	$4,750	$24,640	$7,980	$14,990	$6,580	$58,940
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional Airport	$6,740	$21,040	$10,900	$35,090	$30,750	$104,520
SHR	Commercial	Sheridan	Sheridan County Airport	$5,780	$60,540	$5,900	$22,710	$37,700	$132,630
			Total Commercial	**$133,050**	**$1,225,690**	**$135,850**	**$7,600,610**	**$581,580**	**$9,676,780**
AFO	Business	Lincoln	Afton - Lincoln County Municipal Airport	$750	$30,080	$370		$1,680	$32,880
BYG	Business	Johnson	Buffalo - Johnson County Airport	$550	$1,560	$1,440		$2,150	$5,700
DGW	Business	Converse	Douglas - Converse County Airport	$140	$1,080	$2,900		$2,100	$6,220
EVW	Business	Uinta	Evanston-Uinta County Airport - Burns Field	$650	$1,910	$1,080		$5,840	$9,480
GEY	Business	Big Horn	Greybull - South Big Horn County Airport	$530	$9,170	$1,490		$590	$11,780
LND	Business	Fremont	Lander - Hunt Field	$90	$13,410	$3,320		$820	$17,640
PNA	Business	Sublette	Pinedale - Ralph Wenz Field	$560	$3,130	$2,160		$3,440	$9,290
RWL	Business	Carbon	Rawlins Municipal Airport - Harvey Field	$130	$5,150	$1,180		$1,730	$8,190
SAA	Business	Carbon	Saratoga - Shively Field	$130	$4,120	$2,190		$58,540	$64,980
TOR	Business	Goshen	Torrington Municipal Airport	$750	$2,740	$1,200		$1,120	$5,810

Table 7-5: Estimated Direct State and Local Sales Taxes Paid by Employees Associated with Airport-supported Activities at Study Airports

				Estimated Direct State and Local Sales Taxes Paid by Aviation or Visitor Employees					
FAA ID	Role	County	Airport	Airport Employees	Tenant Employees	CIP (Construction) Employees	Commercial Service Visitor Employee	General Aviation Visitor Employees	Total Employee Sales Tax
WRL	Business	Washakie	Worland Municipal Airport	$1,630	$10,820	$450		$3,130	$16,030
BPI	Intermediate	Sublette	Big Piney - Miley Memorial Field	$760	$0	$460		$610	$1,830
DUB	Intermediate	Fremont	Dubois Municipal Airport	$120	$540	$1,280		$200	$2,140
FBR	Intermediate	Uinta	Fort Bridger Airport	$480	$0	$500		$340	$1,320
GUR	Intermediate	Platte	Guernsey - Camp Guernsey Army Airfield	$140	$9,410	$0		$510	$10,060
EMM	Intermediate	Lincoln	Kemmerer Municipal Airport	$600	$0	$830		$800	$2,230
ECS	Intermediate	Weston	Newcastle - Mondell Field	$140	$1,440	$2,640		$1,410	$5,630
82V	Intermediate	Laramie	Pine Bluffs Municipal Airport	$330	$4,690	$530		$60	$5,610
POY	Intermediate	Park	Powell Municipal Airport	$1,020	$2,640	$660		$790	$5,110
HSG	Intermediate	Hot Springs	Thermopolis - Hot Springs County Airport	$140	$4,230	$1,790		$730	$6,890
EAN	Intermediate	Platte	Wheatland - Phifer Airfield	$140	$0	$4,880		$470	$5,490
U68	Local	Big Horn	Cowley - North Big Horn County Airport	$100	$540	$680		$230	$1,550
DWX	Local	Carbon	Dixon Airport	$290	$1,660	$790		$830	$3,570
W43	Local	Crook	Hulett Municipal Airport	$140	$0	$0		$630	$770
LSK	Local	Niobrara	Lusk Municipal Airport	$140	$0	$570		$160	$870
			Total General Aviation	**$10,450**	**$108,320**	**$33,390**	**$0**	**$88,910**	**$241,070**
			Totals	**$143,500**	**$1,334,010**	**$169,240**	**$7,600,610**	**$670,490**	**$9,917,850**

Source: Jviation and KRAMER aerotek inc.

Table 7-6: Summary of All Tax Revenues for Study Airports

FAA ID	Role	County	Airport	Sales Tax Revenue Grand Total	Percent of Total
CPR	Commercial	Natrona	Casper - Natrona County International Airport	$5,453,010	6.2%
CYS	Commercial	Laramie	Cheyenne Regional Airport - Jerry Olson Field	$2,251,320	2.6%
COD	Commercial	Park	Cody - Yellowstone Regional Airport	$2,413,690	2.8%
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional Airport	$1,288,380	1.5%
JAC	Commercial	Teton	Jackson Hole Airport	$68,027,380	77.5%
LAR	Commercial	Albany	Laramie Regional Airport	$1,449,730	1.7%
RIW	Commercial	Fremont	Riverton - Central Wyoming Regional Airport	$661,010	0.8%
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional Airport	$1,392,750	1.6%
SHR	Commercial	Sheridan	Sheridan County Airport	$1,837,590	2.1%
			Total Commercial	**$84,774,860**	**96.6%**
AFO	Business	Lincoln	Afton - Lincoln County Municipal Airport	$456,030	0.5%
BYG	Business	Johnson	Buffalo - Johnson County Airport	$98,940	0.1%
DGW	Business	Converse	Douglas - Converse County Airport	$88,330	0.1%
EVW	Business	Uinta	Evanston-Uinta County Airport - Burns Field	$121,880	0.1%
GEY	Business	Big Horn	Greybull - South Big Horn County Airport	$87,830	0.1%
LND	Business	Fremont	Lander - Hunt Field	$208,710	0.2%
PNA	Business	Sublette	Pinedale - Ralph Wenz Field	$112,800	0.1%
RWL	Business	Carbon	Rawlins Municipal Airport - Harvey Field	$98,830	0.1%
SAA	Business	Carbon	Saratoga - Shively Field	$765,470	0.9%
TOR	Business	Goshen	Torrington Municipal Airport	$74,780	0.1%
WRL	Business	Washakie	Worland Municipal Airport	$241,570	0.3%
BPI	Intermediate	Sublette	Big Piney - Miley Memorial Field	$16,700	0.0%
DUB	Intermediate	Fremont	Dubois Municipal Airport	$32,240	0.0%
FBR	Intermediate	Uinta	Fort Bridger Airport	$17,680	0.0%
GUR	Intermediate	Platte	Guernsey - Camp Guernsey Army Airfield	$18,900	0.0%
EMM	Intermediate	Lincoln	Kemmerer Municipal Airport	$29,120	0.0%
ECS	Intermediate	Weston	Newcastle - Mondell Field	$75,600	0.1%
82V	Intermediate	Laramie	Pine Bluffs Municipal Airport	$76,550	0.1%
POY	Intermediate	Park	Powell Municipal Airport	$49,520	0.1%
HSG	Intermediate	Hot Springs	Thermopolis - Hot Springs County Airport	$78,950	0.1%
EAN	Intermediate	Platte	Wheatland - Phifer Airfield	$104,120	0.1%
U68	Local	Big Horn	Cowley - North Big Horn County Airport	$26,760	0.0%
DWX	Local	Carbon	Dixon Airport	$64,730	0.1%

Table 7-6: Summary of All Tax Revenues for Study Airports

FAA ID	Role	County	Airport	Sales Tax Revenue Grand Total	Percent of Total
W43	Local	Crook	Hulett Municipal Airport	$7,130	0.0%
LSK	Local	Niobrara	Lusk Municipal Airport	$13,820	0.0%
			Total General Aviation	**$2,966,990**	**3.4%**
			Totals	**$87,741,850**	**100.0%**

Source: Jviation and KRAMER aerotek inc.

7.6 Conclusions

This analysis focused on sales tax revenues generated from direct aviation activity associated with the public airports in Wyoming. As this analysis shows, an estimated $87.7 million in sales tax revenue is collected. These tax revenues are attributable to management activities at Wyoming airports, airport business tenants, visitor expenditures, and an estimated 16,000 direct jobs supported by the airports. Most of these tax revenues come from expenditures by visitors arriving at Wyoming airports and their spending primarily for lodging, food, and rental cars. Tourism supports many jobs in the state. This study determined that air visitors support over 13,400 direct jobs; these jobs are a portion of all direct airport supported jobs estimated in this study at 16,000. These employees, along with others who are associated with the airports, are all contributors through taxable purchases to state and local sales tax revenues.

Concentration on sale tax revenues generated by direct airport activity in the state results in a conservative estimate of total airport-related sales tax generated in the state. Tax revenues from multiplier effects were not included in this analysis.

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8. Economic Impact of the Commercial Airline Function

8.1 Introduction

Scheduled commercial airline service is very important to Wyoming's economy and to its residents, businesses, and visitors. There are nine commercial service airports in Wyoming. The airlines and the associated commercial airline functions that the nine airports support are responsible for significant annual economic impact. This section of the report isolates and highlights the economic impacts that are associated with just commercial airline functions in the state. Economic impacts from commercial airline functions are reported by airport and for the state.

Wyoming has been at the forefront, among all states, for its assistance to communities to maintain existing airline services and attract new service. As a result, Wyoming and its commercial airports have had measurable success as it relates to maintaining and improving scheduled commercial airline service.

Over the past several years, many small communities across the United States have experienced diminishing levels of air service, and some small communities have lost service altogether. Since 2016, at least 32 smaller communities have lost their commercial airline service; this statistic reflects pre-COVID air service conditions. In Wyoming, local, state, and federal partnerships have been instrumental in maintaining, and in some cases even improving, scheduled commercial airline service, while also addressing Wyoming's commercial airline fares. Information on the economic impact from commercial airline activities, Wyoming's commercial air service environment, and the state's airline service compared to other states are discussed this section.

This section is organized as follows:

- Economic impact of the commercial airline function at Wyoming's nine commercial airports
- Contributions to state and local sales tax revenues from commercial airline functions
- Overview of Wyoming's current commercial airline service environment
- Benchmarks for Wyoming's commercial airline service
- Importance of commercial airline service in Wyoming

8.2 Economic Impacts from Commercial Airline Functions

This section of WYDOT's Aviation Economic Impact Study isolates the economic impact from commercial airline activities/functions at the nine commercial airports. Impacts presented in this section were developed using the state IMPLAN model and reflect pre-COVID conditions.

Total annual economic impacts from Wyoming's airports, described in Section 4 of this report, stem from a variety of commercial airline, general aviation, and other aviation activities. During this study's data collection effort, commercial airport managers and business tenants at commercial airports were asked to estimate the portion of their activities that support only specific commercial airline functions. In some cases, airport activities are carried out 100 percent in support of each airport's commercial airline function; in other instances there no relationship between the activity and the airport's commercial airline function; and in other instances activities have dual functions, supporting both commercial airline and other aviation activities at the airport. The economic impacts for Wyoming's commercial airports, discussed in this section, are subsets of each commercial airport's total annual economic impact presented in Section 4.

The previous section of this report, Section 7, estimated state and local sales tax revenues associated with activities supported by Wyoming's airports. Tax estimates are based only on each airport's direct impacts. This section also isolates the portion of total sales tax revenues that are supported exclusively by each airport's commercial airline functions.

In Section 4, annual economic impacts for Wyoming's commercial airports are quantified in terms of four measurements: **employment**; **payroll** associated with this employment; **spending**, and **economic activity** (payroll + spending). **Direct** economic impacts, associated with the commercial airline functions, support additional economic activities by contributing new revenues and income to businesses and workers throughout Wyoming, who in turn support other Wyoming businesses and workers. These successive waves of economic activity, that ripple throughout the Wyoming economy, are often referred to as multiplier impacts. Multiplier impacts in this document are reported as **indirect/induced** impacts. For each airport, the sum of its direct and indirect/induced impacts equals the airport's **total** annual economic impact.

Data to estimate each airport's direct impacts were obtained from the study airports, airport business tenants, WYDOT, and the FAA. The IMPLAN input/output model, as described in previous sections of this report, is used to estimate indirect/induced impacts and ultimately total impacts for each commercial airport.

Each commercial service airport's total annual economic impacts were previously estimated for airport management, aviation related tenants/businesses, and average annual capital investment for expansion or improvement. These impacts are reported in Section 4 of this report. For each of the nine commercial airports, total economic impacts (Section 4) in each of these three categories (management, business tenants, and average annual capital investment) are associated with supporting a combination of commercial airline, general aviation, and other aviation activities.

For this analysis, information was collected to estimate just the percentage of the total annual economic impact in each of the three categories (management, business tenant, and capital investment) that is attributable only to each of the nine airport's commercial airline activities or functions. In addition, each of the commercial service airports have economic impacts that are associated with expenditures of visitors who arrive annually in Wyoming via each commercial airport on a scheduled commercial airline flight. Impacts from commercial visitors are 100 percent tied to each airport's commercial airline function; therefore, it was not necessary to margin the impacts in the commercial visitor expenditure category.

For each impact category, management, business tenants, average annual capital investment, and commercial visitors, the following sections document the portion of the impact in each category that are related only to commercial airline functions.

8.2.1 Annual Economic Impacts Supported by the Commercial Airline Function – Airport Management

Each of the nine commercial service airports have economic activity associated with functions that support the day-to-day management and operation of the airport. Since commercial airports host commercial airline, general aviation, charter, air cargo and freight, military, and sometimes other types of aviation activity, the duties and responsibilities of staff and spending to support day-to-day airport operations is distributed among various aviation functions.

For this analysis, airport management impacts supported by each airport's commercial airline function are isolated. These impacts are shown in **Table 8-1.** Impacts shown in **Table 8-1** are total annual economic impacts and include direct plus indirect/induced impacts.

Table 8-1: Annual Economic Impacts Supported by the Commercial Airline Function – Airport Management

FAA ID	Associated City	Airport Name	Employment			Payroll			Spending			Annual Economic Activity		
			Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total
CPR	Casper	Casper - Natrona County International	24	24	48	$864,400	$579,100	$1,443,500	$2,771,300	$2,438,700	$5,210,000	$3,635,700	$3,017,800	$6,653,500
CYS	Cheyenne	Cheyenne Regional - Jerry Olson Field	15	15	30	$521,900	$349,700	$871,600	$3,929,200	$3,457,700	$7,386,900	$4,451,100	$3,807,400	$8,258,500
COD	Cody	Cody - Yellowstone Regional	10	11	21	$427,100	$286,200	$713,300	$257,500	$226,500	$484,000	$684,600	$512,700	$1,197,300
GCC	Gillette	Gillette - Northeast Wyoming Regional	8	7	15	$535,800	$358,900	$894,700	$543,800	$478,500	$1,022,300	$1,079,600	$837,400	$1,917,000
JAC	Jackson	Jackson Hole	77	77	154	$4,955,500	$3,320,300	$8,275,800	$23,357,700	$20,554,900	$43,912,600	$28,313,200	$23,875,200	$52,188,400
LAR	Laramie	Laramie Regional	5	6	11	$338,900	$227,100	$566,000	$962,100	$846,600	$1,808,700	$1,301,000	$1,073,700	$2,374,700
RIW	Riverton	Riverton Regional	5	5	10	$464,700	$311,300	$776,000	$165,700	$145,900	$311,600	$630,400	$457,200	$1,087,600
RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional	8	7	15	$634,600	$425,200	$1,059,800	$2,146,300	$1,888,700	$4,035,000	$2,780,900	$2,313,900	$5,094,800
SHR	Sheridan	Sheridan County	6	5	11	$329,000	$220,400	$549,400	$1,984,200	$1,746,100	$3,730,300	$2,313,200	$1,966,500	$4,279,700
		Commercial Service Airports Total	**158**	**157**	**315**	**$9,071,900**	**$6,078,200**	**$15,150,100**	**$36,117,800**	**$31,783,600**	**$67,901,400**	**$45,189,700**	**$37,861,800**	**$83,051,500**

Source: Jviation

As this table shows, within the airport management category, the commercial airline function supports the following statewide annual economic impacts:

- Employment 315
- Annual Payroll $15.2 million
- Annual Spending $67.9 million
- Annual Economic Activity $83.1 million

8.2.2 Annual Economic Impacts Supported by the Commercial Airline Function – Airport Business Tenants

Each of the commercial service airports hosts a wide variety of aviation-related businesses tenants. These business tenants have functions that range from supporting the airlines themselves, to businesses that provide ground handling and fueling to the airlines, to concessionaires who provide various services to commercial airline travelers.

Commercial airports also have other business tenants that have no connection with the airport's commercial airline function. Businesses that rent or charter general aviation aircraft or that provide flight training are examples of business tenants that are 100 percent devoted to supporting only general aviation functions. Some business tenants provide services to commercial, general aviation, and air cargo customers. Study research shows that fixed base operators (FBOs) at some commercial airports often serve a variety of aviation users, including the commercial carriers. Sometimes, FBOs are responsible for providing ground handling services and fueling for the commercial carriers, in addition to providing services for general aviation customers.

Study inventory efforts included investigation to determine, for each business tenant at each commercial airport, the percent of their business activity that is related exclusively to supporting the airport's commercial airline function. Using this information and total annual business tenant economic impacts generated previously in this study (Section 4), **Table 8-2** reports the annual economic impact in the business tenant category that is related to supporting only each airport's commercial airline functions.

Table 8-2: Annual Economic Impacts Supported by the Commercial Airline Function – Business Tenants

FAA ID	Associated City	Airport Name	Employment			Payroll			Spending			Annual Economic Activity		
			Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total
CPR	Casper	Casper - Natrona County International	114	68	182	$6,253,000	$4,279,900	$10,532,900	$9,895,500	$4,663,900	$14,559,400	$16,148,500	$8,943,800	$25,092,300
CYS	Cheyenne	Cheyenne Regional - Jerry Olson Field	18	7	25	$787,300	$471,000	$1,258,300	$2,579,300	$1,148,700	$3,728,000	$3,366,600	$1,619,700	$4,986,300
COD	Cody	Cody - Yellowstone Regional	59	30	89	$2,237,800	$1,448,300	$3,686,100	$7,000,100	$2,877,800	$9,877,900	$9,237,900	$4,326,100	$13,564,000
GCC	Gillette	Gillette - Northeast Wyoming Regional	18	11	29	$705,000	$411,700	$1,116,700	$1,447,700	$766,500	$2,214,200	$2,152,700	$1,178,200	$3,330,900
JAC	Jackson	Jackson Hole	230	101	331	$14,286,000	$9,246,700	$23,532,700	$47,548,100	$18,281,700	$65,829,800	$61,834,100	$27,528,400	$89,362,500
LAR	Laramie	Laramie Regional	16	16	32	$656,600	$425,400	$1,082,000	$1,686,200	$1,406,000	$3,092,200	$2,342,800	$1,831,400	$4,174,200
RIW	Riverton	Riverton Regional	17	10	27	$623,100	$406,100	$1,029,200	$1,550,700	$668,300	$2,219,000	$2,173,800	$1,074,400	$3,248,200
RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional	18	13	31	$695,400	$454,500	$1,149,900	$1,663,100	$768,500	$2,431,600	$2,358,500	$1,223,000	$3,581,500
SHR	Sheridan	Sheridan County	38	25	63	$1,806,200	$1,260,500	$3,066,700	$1,191,500	$697,100	$1,888,600	$2,997,700	$1,957,600	$4,955,300
		Commercial Service Airports Total	**528**	**281**	**809**	**$28,050,400**	**$18,404,100**	**$46,454,500**	**$74,562,200**	**$31,278,500**	**$105,840,700**	**$102,612,600**	**$49,682,600**	**$152,295,200**

Source: Jviation

As **Table 8-2** shows, when each airport's business tenants are analyzed, the portion of their economic impact that is related exclusively to supporting the commercial airline function is estimated as follows:

- Employment 809
- Annual Payroll $46.5 million
- Annual Spending $105.8 million
- Annual Economic Activity $152.3 million

8.2.3 Annual Economic Impacts Supported by the Commercial Airline Function – Average Annual Capital Investment

Annually, each of the commercial airports undertakes various projects to maintain, improve, and expand the airport. For the WYDOT study, a five-year average for all capital investment at each airport is used to estimate total annual economic impact in this category. Investment between 2015-2019 is used to establish economic impacts in this category. Investment, considered in this analysis, includes both WYDOT and FAA grants, local funds to match those grants, third party investment (primarily from business tenants), and investment that the airports themselves make. Total impacts in the capital investment category, for each of the commercial airports, were previously estimated and reported in Section 4 of this report.

To estimate capital investment impacts, related just to the commercial airline function, each airport's capital investment projects over the past five years were reviewed to determine if the project was related to supporting the airport's commercial airport function. Based on this review, the total average annual economic impact in the capital investment category is margined to reflect the portion of the total impact that supports each of nine airport's commercial airline functions. The results are shown in **Table 8-3**.

Table 8-3: Annual Economic Impacts Supported by the Commercial Airline Function – Average Annual Capital Investment

FAA ID	Associated City	Airport Name	Employment			Payroll			Spending			Annual Economic Activity		
			Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total
CPR	Casper	Casper - Natrona County International	27	17	44	$1,008,900	$726,400	$1,735,300	$4,449,100	$2,536,000	$6,985,100	$5,458,000	$3,262,400	$8,720,400
CYS	Cheyenne	Cheyenne Regional - Jerry Olson Field	22	15	37	$913,400	$657,700	$1,571,100	$3,647,900	$2,079,400	$5,727,300	$4,561,300	$2,737,100	$7,298,400
COD	Cody	Cody - Yellowstone Regional	12	8	20	$475,900	$342,700	$818,600	$2,046,100	$1,166,300	$3,212,400	$2,522,000	$1,509,000	$4,031,000
GCC	Gillette	Gillette - Northeast Wyoming Regional	6	4	10	$232,900	$167,700	$400,600	$976,700	$556,800	$1,533,500	$1,209,600	$724,500	$1,934,100
JAC	Jackson	Jackson Hole	59	39	98	$3,781,000	$2,722,300	$6,503,300	$8,415,600	$4,796,800	$13,212,400	$12,196,600	$7,519,100	$19,715,700
LAR	Laramie	Laramie Regional	14	10	24	$561,400	$404,300	$965,700	$2,383,800	$1,358,800	$3,742,600	$2,945,200	$1,763,100	$4,708,300
RIW	Riverton	Riverton Regional	12	7	19	$436,700	$314,300	$751,000	$1,950,500	$1,111,700	$3,062,200	$2,387,200	$1,426,000	$3,813,200
RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional	15	9	24	$544,700	$392,100	$936,800	$2,432,800	$1,386,800	$3,819,600	$2,977,500	$1,778,900	$4,756,400
SHR	Sheridan	Sheridan County	5	3	8	$187,600	$135,100	$322,700	$796,600	$454,000	$1,250,600	$984,200	$589,100	$1,573,300
		Commercial Service Airports Total	**172**	**112**	**284**	**$8,142,500**	**$5,862,600**	**$14,005,100**	**$27,099,100**	**$15,446,600**	**$42,545,700**	**$35,241,600**	**$21,309,200**	**$56,550,800**

Source: Jviation

As **Table 8-3** shows, when each airport's capital investments are analyzed, the portion of the statewide economic impact that is related exclusively to supporting the commercial airline function is estimated as follows:

- Employment 284
- Annual Payroll $14.0 million
- Annual Spending $42.5 million
- Annual Economic Activity $56.5 million

8.2.4 Annual Economic Impacts Supported by the Commercial Airline Function – Commercial Airline Visitors

Each of the commercial airports has significant annual economic impact that is associated with expenditures from commercial visitors who arrive in Wyoming on a scheduled commercial airline flight. Once in Wyoming, visitors have spending for lodging, food, ground transportation, retail purchases, and entertainment. The economic impacts from the commercial visitors to each airport (direct, indirect/induced, and total) were previously documented in Sections of 3 and 4 of this report.

Commercial visitor impacts are 100 percent associated with each airport's commercial airline function, and all previously documented benefits in this category are assigned to the commercial airline function impacts reported in this section. Commercial visitor impacts for each airport are shown in **Table 8-4.** While each of the commercial airports also accommodates visitors who arrive on general aviation aircraft, general aviation visitor impacts are not associated with the airport's commercial airline function; and their impacts were not considered when estimating each airport's economic impact associated with the commercial airline function.

Table 8-4: Annual Economic Impacts Supported by the Commercial Airline Function – Commercial Visitors

FAA ID	Associated City	Airport Name	Employment			Payroll			Spending			Annual Economic Activity		
			Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total	Direct	Indirect/ Induced	Total
CPR	Casper	Casper - Natrona County International	430	128	558	$10,594,100	$4,131,700	$14,725,800	$19,340,700	$9,670,400	$29,011,100	$29,934,800	$13,802,100	$43,736,900
CYS	Cheyenne	Cheyenne Regional - Jerry Olson Field	69	21	90	$1,840,700	$717,800	$2,558,500	$2,960,300	$1,480,100	$4,440,400	$4,801,000	$2,197,900	$6,998,900
COD	Cody	Cody - Yellowstone Regional	289	86	375	$7,266,200	$2,833,800	$10,100,000	$12,846,200	$6,423,100	$19,269,300	$20,112,400	$9,256,900	$29,369,300
GCC	Gillette	Gillette - Northeast Wyoming Regional	116	34	150	$2,972,700	$1,159,400	$4,132,100	$5,091,100	$2,545,500	$7,636,600	$8,063,800	$3,704,900	$11,768,700
JAC	Jackson	Jackson Hole	10,951	3,285	14,236	$452,944,700	$176,648,500	$629,593,200	$310,193,700	$155,096,900	$465,290,600	$763,138,400	$331,745,400	$1,094,883,800
LAR	Laramie	Laramie Regional	98	30	128	$2,500,900	$975,300	$3,476,200	$4,351,500	$2,175,800	$6,527,300	$6,852,400	$3,151,100	$10,003,500
RIW	Riverton	Riverton Regional	37	11	48	$909,900	$354,900	$1,264,800	$1,688,200	$844,100	$2,532,300	$2,598,100	$1,199,000	$3,797,100
RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional	87	26	113	$2,130,000	$830,800	$2,960,800	$3,952,000	$1,976,000	$5,928,000	$6,082,000	$2,806,800	$8,888,800
SHR	Sheridan	Sheridan County	47	14	61	$1,195,700	$466,300	$1,662,000	$2,080,400	$1,040,200	$3,120,600	$3,276,100	$1,506,500	$4,782,600
		Commercial Service Airports Total	**12,124**	**3,635**	**15,759**	**$482,354,900**	**$188,118,500**	**$670,473,400**	**$362,504,100**	**$181,252,100**	**$543,756,200**	**$844,859,000**	**$369,370,600**	**$1,214,229,600**

Source: Jviation

As **Table 8-4** shows, statewide economic impacts related to expenditures from commercial visitors who arrive in Wyoming via each of the nine commercial airports are as follows:

- Employment 15,759
- Annual Payroll $670.5 million
- Annual Spending $543.7 million
- Annual Economic Activity $1.2 billion

8.2.5 Annual Economic Impacts Supported by the Commercial Airline Function – All Impact Categories

Economic impacts related to each airport commercial service airport's airline functions are associated with a percentage of each airport's management category, some business tenants, a portion of each airport's average annual capital investment, and all visitors arriving on scheduled commercial airline flights. When impacts in all categories are considered, the economic impact associated with each commercial airport's airline function are estimated as shown in **Table 8-5**. All impacts reported in **Table 8-5** represent total impacts (direct plus indirect/induced) and all impacts reflect pre-COVID conditions at the Wyoming commercial service airports. As **Table 8-5** shows, total economic impacts related to the commercial airline function for all nine commercial airports are as follows:

- Employment 17,167
- Annual Payroll $746.1 million
- Annual Spending $760.0 million
- Annual Economic Activity $1.5 billion

Table 8-5: Total Economic Impacts from the Commercial Airline Function

FAA ID	Associated City	Airport Name	Total Employment	Total Payroll	Total Spending	Total Annual Economic Activity
CPR	Casper	Casper - Natrona County International	832	$28,437,500	$55,765,600	$84,203,100
CYS	Cheyenne	Cheyenne Regional - Jerry Olson Field	182	$6,259,500	$21,282,600	$27,542,100
COD	Cody	Cody - Yellowstone Regional	505	$15,318,000	$32,843,600	$48,161,600
GCC	Gillette	Gillette - Northeast Wyoming Regional	204	$6,544,100	$12,406,600	$18,950,700
JAC	Jackson	Jackson Hole	14,819	$667,905,000	$588,245,400	$1,256,150,400
LAR	Laramie	Laramie Regional	195	$6,089,900	$15,170,800	$21,260,700
RIW	Riverton	Riverton Regional	104	$3,821,000	$8,125,100	$11,946,100
RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional	183	$6,107,300	$16,214,200	$22,321,500
SHR	Sheridan	Sheridan County Airport	143	$5,600,800	$9,990,100	$15,590,900
		All Commercial Service Airports Total	**17,167**	**$746,083,100**	**$760,044,000**	**$1,506,127,100**

Source: Jviation

8.3 Annual State and Local Sales Tax Revenues from Commercial Airline Functions

Airport activities in Wyoming contribute to state and local sales tax revenues. Section 7 of this report provides an estimate of total state and local sales tax revenues associated with all airports; tax impacts presented previously in Section 7 are based only on each airport's annual direct economic impacts (see Section 3 for Direct Impacts). Additional indirect/induced impacts, estimated in Section 4, are not considered in the tax revenue analysis.

Aviation-related local and state sales taxes come from a variety of airport-supported activities that create taxable events. For this particular analysis for the commercial airline function, the following were considered:

- Sales tax collected on airport taxable purchases of goods, supplies, and materials to support airport operations
- Sales tax collected on the purchase of goods, supplies, and materials by airport business tenants
- Sales tax collected on the taxable portion of average annual CIP investment
- Sales tax paid by air visitors arriving on commercial airlines when they have expenditures for lodging, food, ground transportation, entertainment, or retail purchases
- Sales tax paid by those whose jobs are supported exclusively by airline-supported activities; these are direct jobs identified in the management, business tenant, capital investment, and commercial visitor expenditure categories

Total state and local sales tax revenues for each commercial service airport are estimated and presented in Section 7. For this particular analysis, a subset of those total tax revenues, associated with and supported only by each airport's commercial airline function are identified. **Table 8-6** shows total state and local sales taxes collected on commercial airline functions for the identified spending categories. Again, tax revenue estimates shown in **Table 8-6** are those tied only to the commercial airline function at each commercial service airport and are based only on direct impacts.

Information in **Table 8-6** shows sales tax revenues by airport and total tax revenues for each tax revenue category. It is important to re-state that these tax estimates are based only on direct economic impacts and that they reflect just the portion of each airport's state and local sales tax revenues that are related to each commercial airport's airline functions. As **Table 8-6** shows, total annual state and local sales tax for spending in all categories related to the commercial airline function for all commercial airports in Wyoming is estimated at $66.6 million.

In addition to state and local sales tax revenues associated with spending, all direct employees whose jobs are supported by commercial airline functions are also responsible for other sales tax contributions. Thousands of jobs have been identified in Wyoming that are supported by activities associated with the commercial airlines that serve the state. Each airport-supported job has an associated income (payroll), and a portion of each worker's income is spent annually on taxable items. Section 7 previously estimated all state and local sales tax revenues from employee expenditures; this section isolates the portion of the tax revenues that are associated with payroll and the spending of payroll that is supported by each airport's commercial airline function.

Table 8-6: Sales Tax Paid on Spending: Management, Business Tenants, CIP Investment, and Visitor Spending for the Commercial Airline Function

FAA ID	Role	County	Airport	Airport Management	Tenants	CIP Investment	Commercial Visitor Spending	Total State and Local Sales Tax on Spending
CPR	Commercial	Natrona	Casper - Natrona County International	$134,030	$478,570	$263,960	$2,356,120	$3,232,680
CYS	Commercial	Laramie	Cheyenne Regional - Jerry Olson Field	$228,170	$115,240	$264,870	$400,310	$1,008,590
COD	Commercial	Park	Cody - Yellowstone Regional	$9,900	$269,240	$97,000	$1,329,790	$1,705,930
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional	$26,300	$70,020	$58,500	$566,880	$721,700
JAC	Commercial	Teton	Jackson Hole	$1,356,370	$2,761,090	$708,250	$52,449,840	$57,275,550
LAR	Commercial	Albany	Laramie Regional	$55,870	$97,910	$171,030	$561,700	$886,510
RIW	Commercial	Fremont	Riverton Regional	$8,020	$75,000	$115,450	$180,650	$379,120
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional	$103,800	$80,430	$144,000	$488,750	$816,980
SHR	Commercial	Sheridan	Sheridan County	$115,220	$69,190	$57,150	$284,930	$526,490
			Total Commercial	**$2,037,680**	**$4,016,690**	**$1,880,210**	**$58,618,970**	**$66,553,550**

Source: Kramer AEROTEK and Jviation

Table 8-7 presents estimated state and local sales tax revenues associated with payroll, and the spending of that payroll, for all direct employees in Wyoming whose jobs are associated with commercial airline functions at the nine commercial airports. As this table shows, there is an additional $8.2 million in annual state and local sales tax revenue supported by the spending of airport-supported employees whose jobs are related to the commercial airline function.

Table 8-7: Estimated Direct State and Local Sales Taxes Paid by Employees Supported by the Commercial Airline Function

FAA ID	Role	County	Airport	Airport Employees	Tenant Employees	CIP (Construction) Employees	Commercial Service	Total Employee Sales Tax
CPR	Commercial	Natrona	Casper - Natrona County International	$11,380	$74,290	$12,710	$172,690	$271,070
CYS	Commercial	Laramie	Cheyenne Regional - Jerry Olson Field	$8,420	$ 8,820	$14,460	$33,280	$64,980
COD	Commercial	Park	Cody - Yellowstone Regional	$4,790	$27,220	$4,990	$98,710	$135,710
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional	$5,370	$9,610	$2,820	$46,520	$64,320
JAC	Commercial	Teton	Jackson Hole	$60,140	$180,180	$46,570	$7,129,130	$7,416,020
LAR	Commercial	Albany	Laramie Regional	$4,230	$12,880	$8,220	$47,490	$72,820
RIW	Commercial	Fremont	Riverton Regional	$4,030	$10,010	$5,560	$14,990	$34,590
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional	$5,730	$11,010	$6,930	$35,090	$58,760
SHR	Commercial	Sheridan	Sheridan County	$4,040	$24,920	$2,750	$22,710	$54,420
			Total Commercial	**$108,130**	**$358,940**	**$105,010**	**$7,600,610**	**$8,172,690**

Source: Kramer AEROTEK and Jviation

This analysis shows that, considering only commercial airline activities supported by the nine commercial airports, total annual state and local sales tax revenues associated with direct economic impacts are estimated at $74.7 million. Total state and local tax revenues for each commercial service airport, from only the commercial airline function, are shown in **Table 8-8.** This table also shows each airport's percent of total annual estimated total tax revenue and each airport's total tax revenue as previously estimated in WYDOT's 2013 statewide aviation economic impact study.

Table 8-8: Total State and Local Tax Sales Revenues from Commercial Airline Functions (2020 versus 2013)

FAA ID	Role	County	Airport	2020 Total State and Local Sales Tax Revenues from Commercial Airline Functions	Percent of Total	2013 Total State and Local Sales Tax Revenues from the Commercial Airline Function	Difference
CPR	Commercial	Natrona	Casper - Natrona County International	$3,503,750	4.7%	$3,067,400	$436,350
CYS	Commercial	Laramie	Cheyenne Regional - Jerry Olson Field	$1,073,570	1.4%	$872,180	$201,390
COD	Commercial	Park	Cody - Yellowstone Regional	$1,841,640	2.5%	$969,270	$872,370
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional	$786,020	1.1%	$667,160	$118,860
JAC	Commercial	Teton	Jackson Hole	$64,691,570	86.6%	$38,092,500	$26,599,070
LAR	Commercial	Albany	Laramie Regional	$959,330	1.3%	$760,380	$198,950
RIW	Commercial	Fremont	Riverton Regional	$413,710	0.6%	$377,860	$35,850
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional	$875,740	1.2%	$508,840	$366,900
SHR	Commercial	Sheridan	Sheridan County	$580,910	0.8%	$768,700	$(187,790)
			Total Commercial	**$74,726,240**		**$46,084,290**	**$28,641,950**

Source: Kramer AEROTEK and Jviation

8.3.1 Comparison of 2013 and 2020 Statewide Economic Impacts from Commercial Airline Functions

As noted, a similar analysis to isolate the economic impacts and the annual state and local tax revenues from commercial airline functions at Wyoming's commercial airports was conducted in 2013. Comparing 2013 and 2020 results shows that both statewide economic impacts and tax revenues supported by commercial airline functions in the state have grown. **Table 8-9** compares estimates prepared in 2013 versus those prepared as part of this 2020 effort; 2020 impacts presented in **Table 8-9** are based on pre-COVID conditions. Economic impacts shown in **Table 8-9** include both direct plus indirect/induced impacts; tax revenues are based only on direct impacts. As shown in **Table 8-9**, economic impacts and annual state and local tax revenues associated with the commercial airline function at the nine commercial airports in Wyoming have increased.

As illustrated, commercial airline functions at Wyoming's nine commercial airports are responsible for notable economic benefits. Sections that follow report on Wyoming's commercial airline service and compare that service to airline service in other states.

Table 8-9: 2013 vs 2020 Total Annual Economic Impacts and Annual Sales Tax Revenues from Commercial Airline Functions

	2013	2020
Employment	10,012	17,167
Payroll	$413.3 million	$746.1 million
Annual Economic Activity	$1.1 billion	$1.5 billion
State/Local Sales Tax Revenues	$46.3 million	$74.7 million

Source: Jviation

8.4 Wyoming's Current Air Service Environment

One measurement that helps to provide context for Wyoming's commercial airline service is the number of passengers that board flights at each commercial airport. These travelers are referred to as enplanements. Economic impacts for the commercial airline function at the Wyoming airports were last measured in 2013. As **Table 8-10** shows, since that time, collectively, enplanements for all nine commercial airports increased.

As **Table 8-10,** however, trends in enplaned passengers have not necessarily been consistent among all nine commercial service airports. On an individual airport basis, between 2013 and 2019, six of the nine commercial airports have higher enplanements in 2019 than they did in 2013. The average annual rate of increase for enplanements at all Wyoming commercial airports between 2013 and 2019 was 4.5 percent. All enplanements in the United States for all commercial airports, between 2013 and 2019, increased at an average annual rate of 3.9 percent; Wyoming's growth in enplaned passengers exceeded the national average.

Table 8-10: Historic Enplanements for Commercial Airports in Wyoming

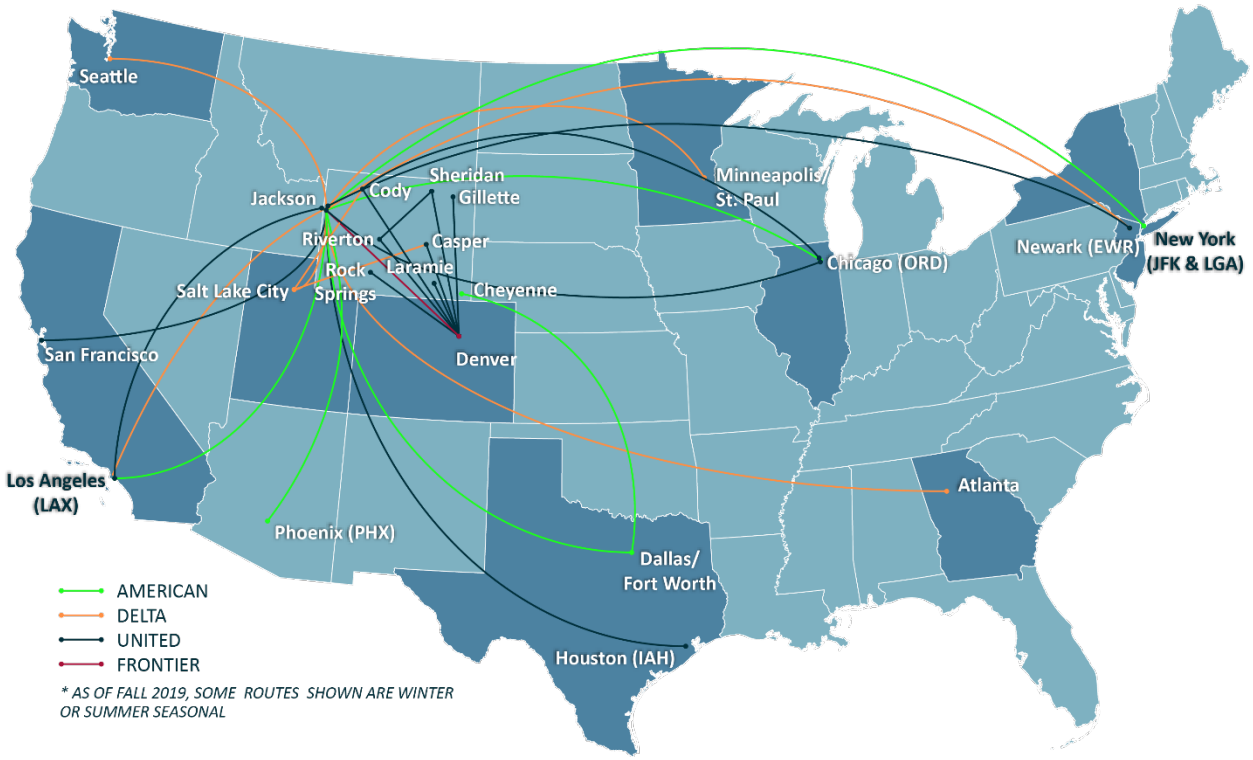
FAA ID	Airport	City	2013	2014	2015	2016	2017	2018	2019
COD	Yellowstone Regional	Cody	31,009	32,301	33,099	40,288	39,505	39,383	41,220
CPR	Casper/Natrona County International	Casper	98,628	103,467	102,782	91,734	95,571	87,264	97,438
CYS	Cheyenne Regional/Jerry Olson Field	Cheyenne	10,777	4,432	2,232	1,624	864	1,618	15,888
GCC	Gillette-Campbell County	Gillette	28,448	27,235	31,426	29,585	30,155	27,627	30,174
JAC	Jackson Hole	Jackson	290,615	312,021	309,337	341,856	342,847	382,507	443,102
LAR	Laramie Regional	Laramie	12,402	12,241	13,707	14,979	14,924	16,392	17,896
RIW	Riverton Regional	Riverton	13,439	7,708	3,591	4,323	7,773	7,297	7,506
RKS	Southwest Wyoming Regional	Rock Springs	23,579	19,636	17,179	15,882	17,400	22,519	23,656
SHR	Sheridan County	Sheridan	14,056	8,612	1,097	9,166	10,366	9,773	10,093
			522,953	**527,653**	**514,450**	**549,437**	**559,405**	**594,380**	**686,592**

Source: WYDOT

Figure 8-1 depicts Wyoming's commercial airline service as of the fall of 2019, when some of the data collection for the economic impact study was completed. As shown at that time, Wyoming airports are served by four commercial airlines: American, Delta, Frontier, and United. Flights from Wyoming reached other commercial airports in 10 different states. Most flights were to airline connecting hubs or large hub commercial airports. Flights from Wyoming to these airports provide access to various domestic and international destinations.

To provide context for Wyoming's commercial airline service, the next section compares Wyoming's service to service in other states.

Figure 8-1: Wyoming's 2019 Commercial Airline Service



Source: WYDOT

8.5 Benchmarks for Commercial Airline Service

To provide a higher-level of context and a general understanding of Wyoming's commercial airline service, Wyoming's commercial airline service is compared to airline service in other states and to U.S. averages for the following:

- Growth in commercial airline passenger enplanements
- Changes in scheduled departing seats on commercial airline flights
- Variations in average one-way airfares

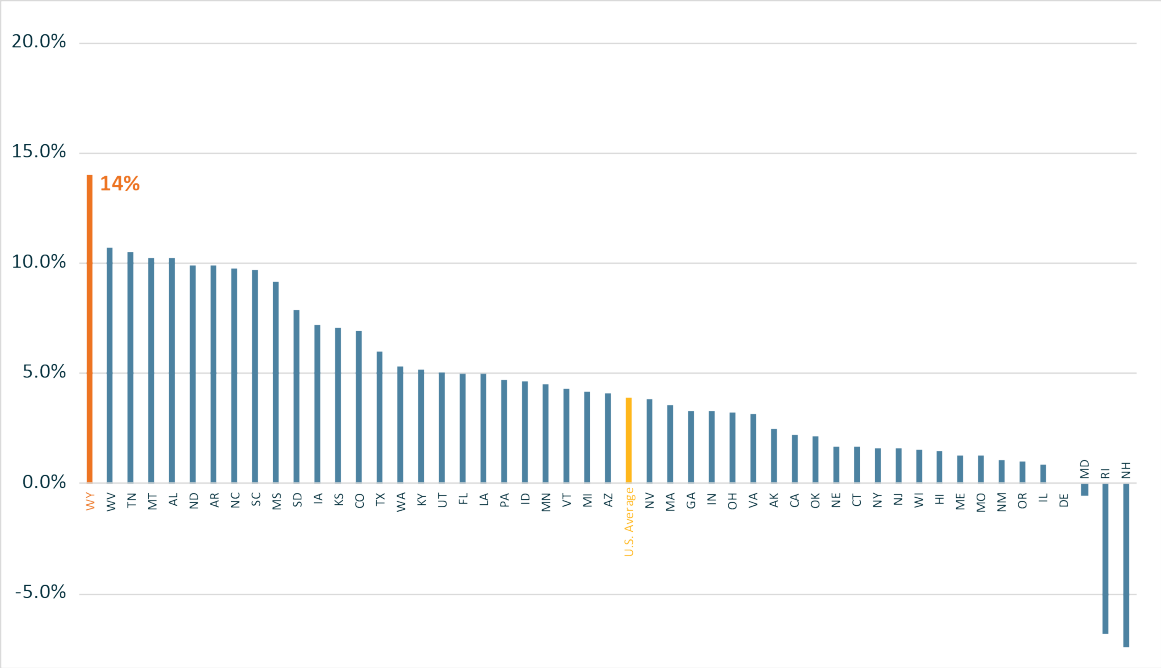
It is important to note that all information, reflects pre-COVID conditions at Wyoming's nine commercial service airports.

8.5.1 Annual Airline Enplanements

As shown in **Figure 8-2,** between 2018 and 2019, among all states, Wyoming experienced the highest rate of increase in annual commercial passenger enplanements. Wyoming increased from 603,422 to 687,902 total enplaned passengers, an increase of 14 percent for the one-year period. Wyoming's rate of increase was significantly above the national average (3.9 percent) for all commercial airports. As **Figure 8-2** shows, most

states experienced an increase in passenger enplanements between 2018 and 2019, but a handful of states experienced a net decline.

Figure 8-2: Comparison of Percentage Change in Annual Enplanements 2018 vs 2019 All States



Source: Federal Aviation Administration

Table 8-2 and **Figure 8-3** help to explain the increased passenger enplanement levels at Wyoming's commercial airports between 2018 and 2019. Information in **Table 8-2** shows annually for 2016, 2017, 2018, and 2019 the percent of Wyoming related commercial passenger enplanements that:

- Begin their commercial airline trip using their "home" or the Wyoming commercial airport that is closest to them
- Leave the state to begin their commercial airline trip at Denver International Airport
- Begin their commercial airline trip using an alternative commercial airport beyond the state
- Use Salt Lake City International to initiate their commercial airline travel
- Use a Wyoming commercial airport, but not their home or the local airport which is closest to them, to start their commercial airline travel

This same information on passenger retention and leakage is displayed graphically in **Figure 8-3.** Within the airline industry, when a commercial air traveler leaves the market area of their local or home airport (the commercial airport that is closest to them) to start their commercial airline trip at an alternative commercial airport, the traveler is referred to a "leaked" passenger. All travelers that leave the market area of their local airport to start their commercial airline travel are often referred to collectively as the airport's passenger leakage.

Table 8-2: Airport Usage for Wyoming's Commercial Airline Travelers

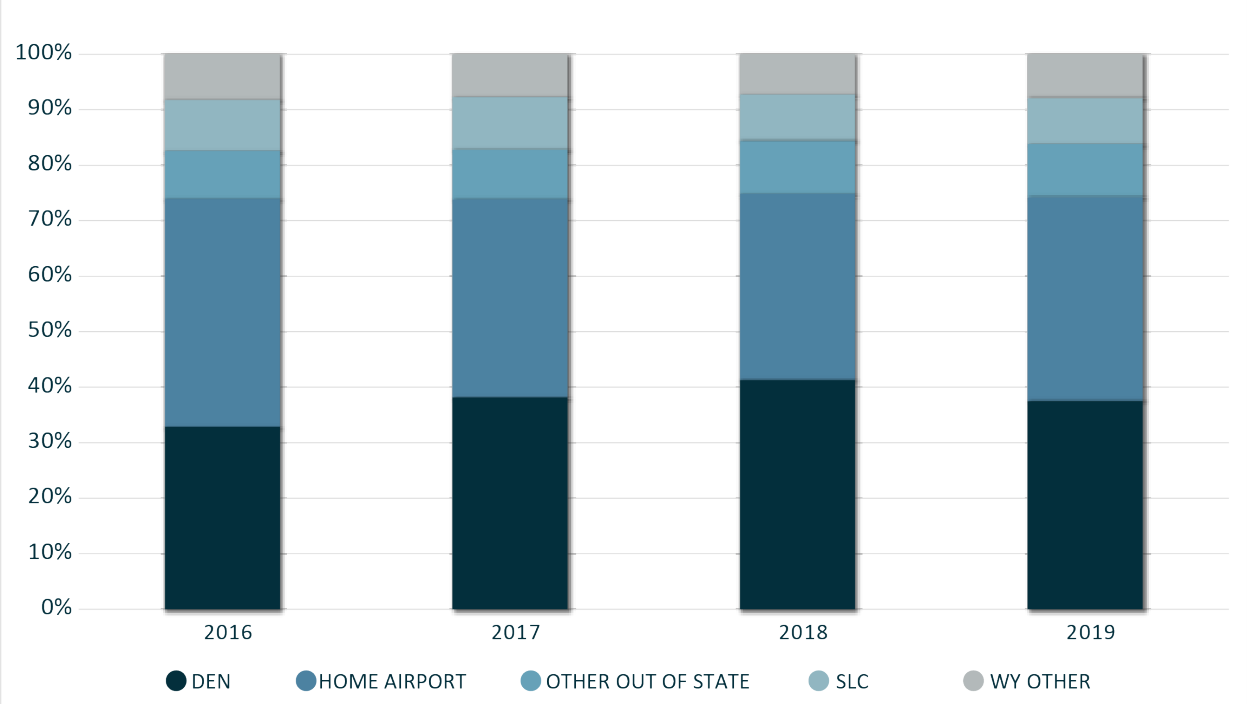
	2016	2017	2018	2019
Using Denver International	32.87%	38.15%	41.27%	37.46%
Using Home/Local Airport	41.05%	35.66%	33.54%	36.70%
Using Other Out-of-State Airport	8.64%	8.96%	9.48%	9.63%
Using Salt Lake City International	9.17%	9.53%	8.45%	8.25%
Using Other Wyoming Commercial Airport	8.28%	7.70%	7.26%	7.96%

Source: Airline Reporting Corporation

As information in **Table 8-2** and **Figure 8-3** shows, between 2018 and 2019, a lower percent of Wyoming's commercial airline travelers used Denver International and Salt Lake City International airports for their commercial airline trips. This decrease in passenger "leakage" in 2019 to a non-Wyoming airport helped Wyoming's nine commercial airports experience a collective increase in passenger enplanements between 2018 and 2019. Wyoming's 2018 to 2019 percent increase in enplaned commercial passengers was the highest among all states.

From 2016 – 2019, the information in **Table 8-2** shows various levels of passenger leakage to non-Wyoming airports. Passenger leakage is influenced by many factors. Most prominent among these are the level of service and service reliability at local/home Wyoming airports and comparative airfares. Information in **Table 8-2** implies that between 2017 and 2019, Wyoming airports are having more success in capturing passengers associated with their respective market areas.

Figure 8-3: Comparative Passenger Retention and Leakage Wyoming Airports 2016 – 2019

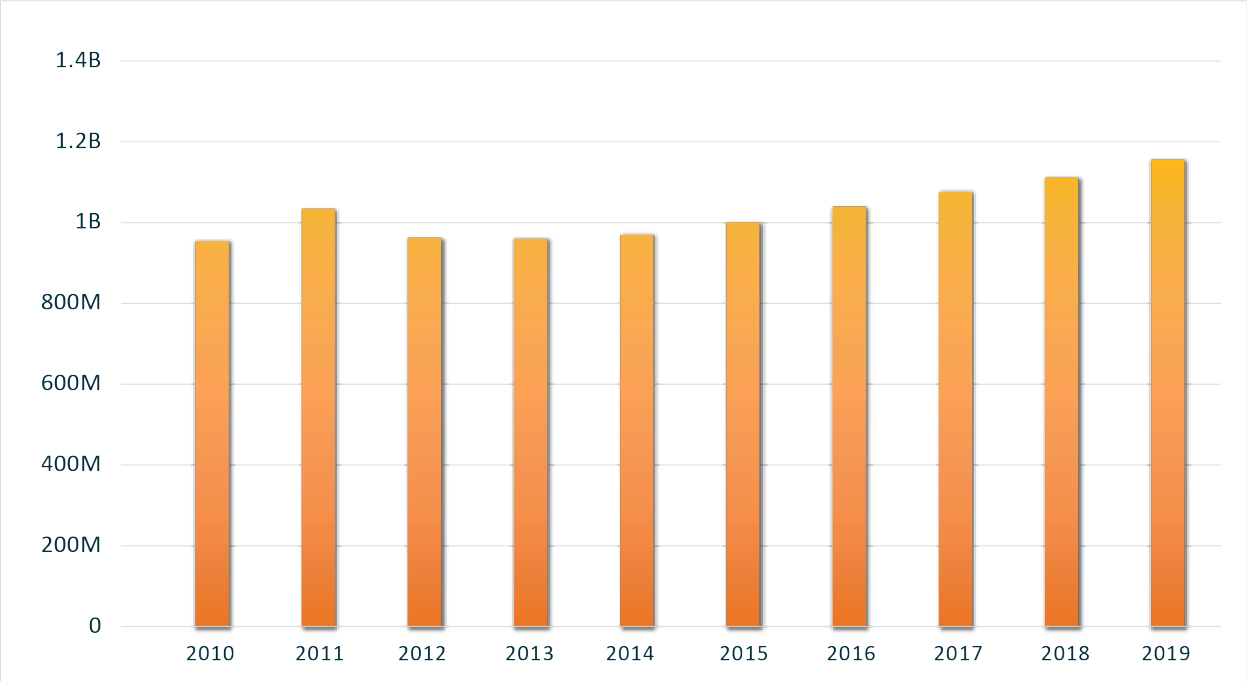


Source: Airline Reporting Corporation

8.5.2 Departing Commercial Airline Seats

Another benchmark for providing context for Wyoming's commercial airline service relates to departing airline seats. **Figure 8-4** provides information on national changes for this benchmark. This figure shows changes in total departing commercial airline seats for all commercial airports in the United States. Since 2013, year-over-year, the United States experienced additional capacity; as **Figure 8-4** shows, by 2019, total departing commercial airline seats increased to almost 1.2 billion.

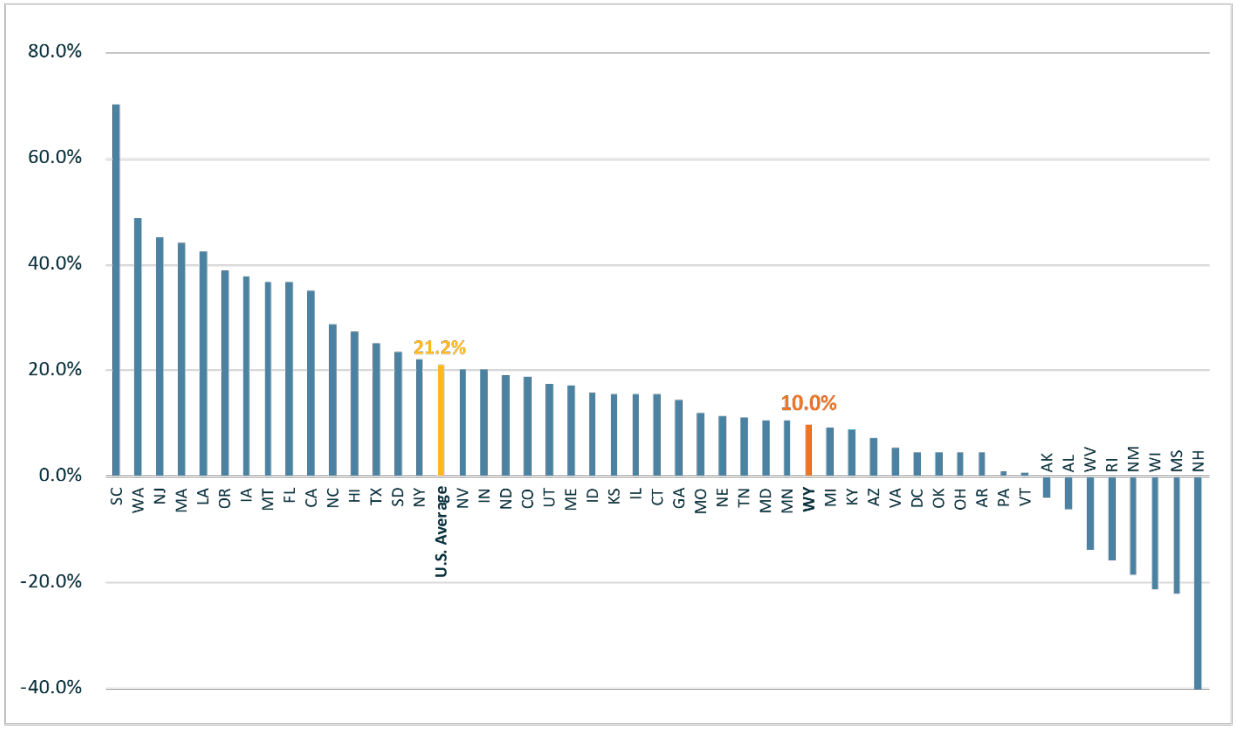
Figure 8-4: Total U.S. Scheduled Departing Commercial Airline Seats



Source: Airline Data, Inc.

How well Wyoming performed in terms of commercial airline activity can be seen in the comparative percentage change in departing commercial airline seats by state. **Figure 8-5** provides information that shows each state's percentage increase or decrease in departing seats on a scheduled commercial airline between calendar year 2010 and 2019. As shown in **Figure 8-5**, for all states, the average percent increase in departing commercial airline seats over this period was 21.2percent. For the same time frame (2010-2019), Wyoming's percent increase was 10 percent. Wyoming's scheduled departing seats increased from 803,488 in 2010 to 883,553 in 2019, an increase of an additional 80,065 seats annually. Percentage wise, Wyoming has lagged behind in terms of its increase, when compared to other states.

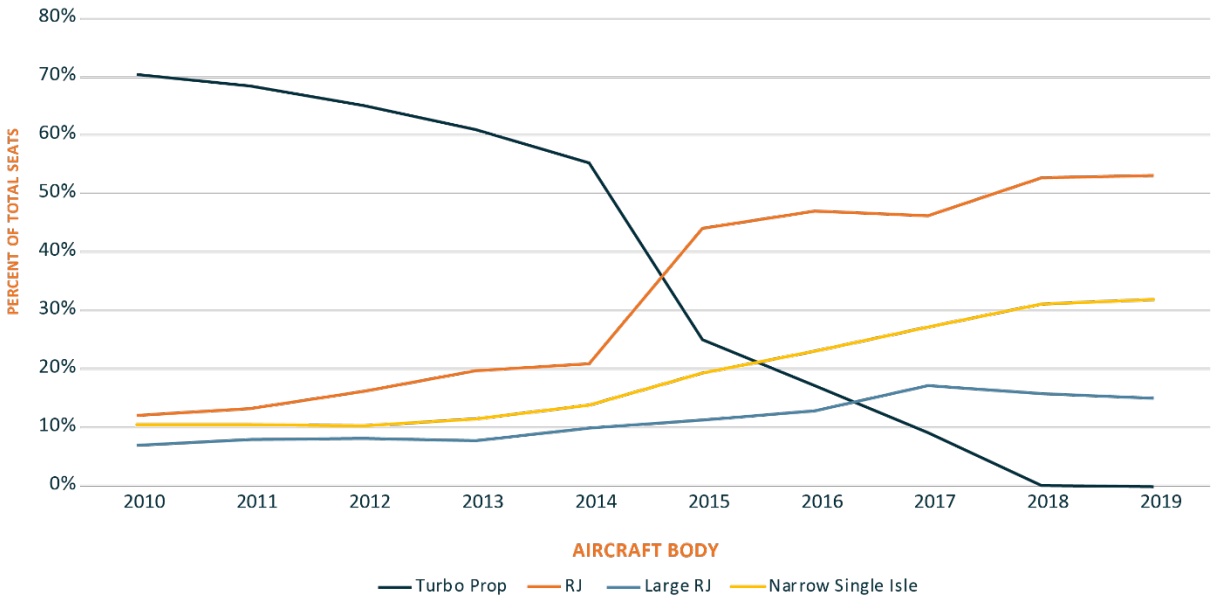
Figure 8-5: Change in Departing Commercial Airline Seats by State 2010-2019



Source: Airline Data, Inc.

Similar to most states, Wyoming experienced an increase in the seating capacity for commercial aircraft that serve the state's nine commercial airports. Primarily as result of airlines using larger commercial aircraft, Wyoming's number of scheduled departing airline seats increased. As **Figure 8-6** shows, since 2010, the percent of commercial turboprop aircraft used to provide service to Wyoming airports decreased. At the same time, the percent of larger regional jets and narrow-body commercial jets serving Wyoming's commercial airports increased. The higher number of seats available on the commercial jet aircraft that serve the Wyoming's commercial airports helps account for the state's increased number of departing commercial airline seats between 2010 and 2019. Additional flight frequencies and service to new destinations, for some airports, also contribute to the state's growth in annual departing airline seats identified in this section.

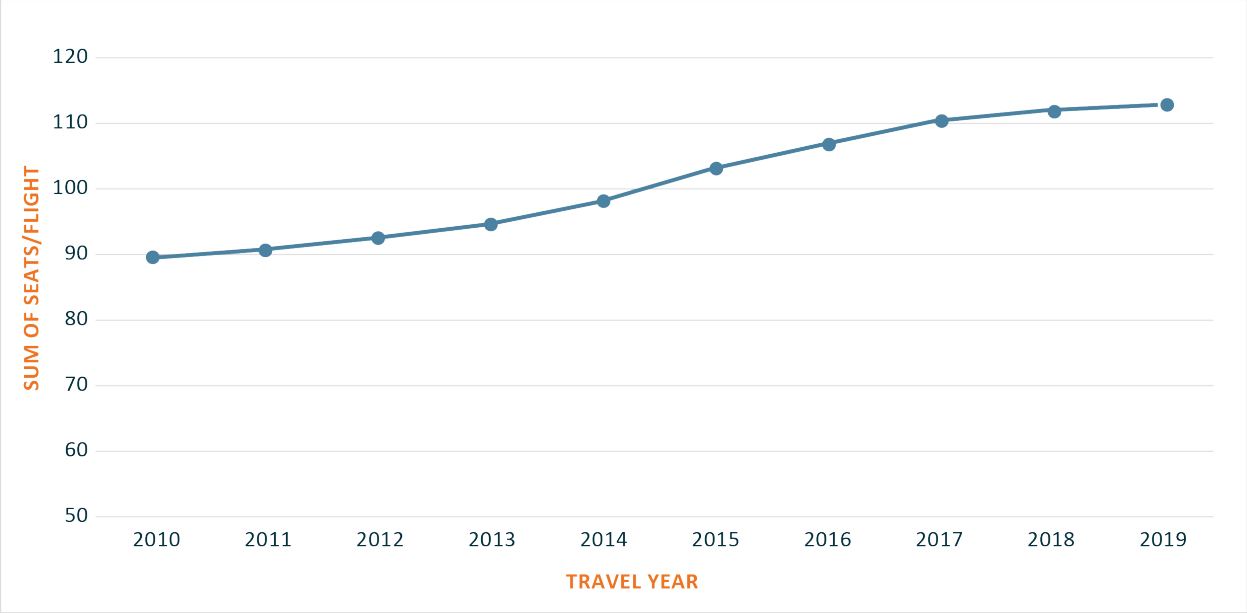
Figure 8-6: Commercial Aircraft Fleet Serving Wyoming Airports



Source: Airline Data, Inc.

As a result of the increased seating capacity for the commercial aircraft serving Wyoming's commercial airports, the average number of seats per departing aircraft for all airports has also grown. **Figure 8-7** depicts this increase. As shown, in 2010, the average seating capacity for commercial aircraft serving all commercial airports in Wyoming was less than 90. By 2019, Wyoming's statewide average seating capacity per departing commercial airline flight increased and exceeded 110 seats. This change is attributable to several factors which include the retirement of turboprop aircraft, the rise in the number of larger regional jets serving Wyoming commercial airports, and increased service by airlines using larger commercial jet aircraft to serve the Jackson Hole Airport.

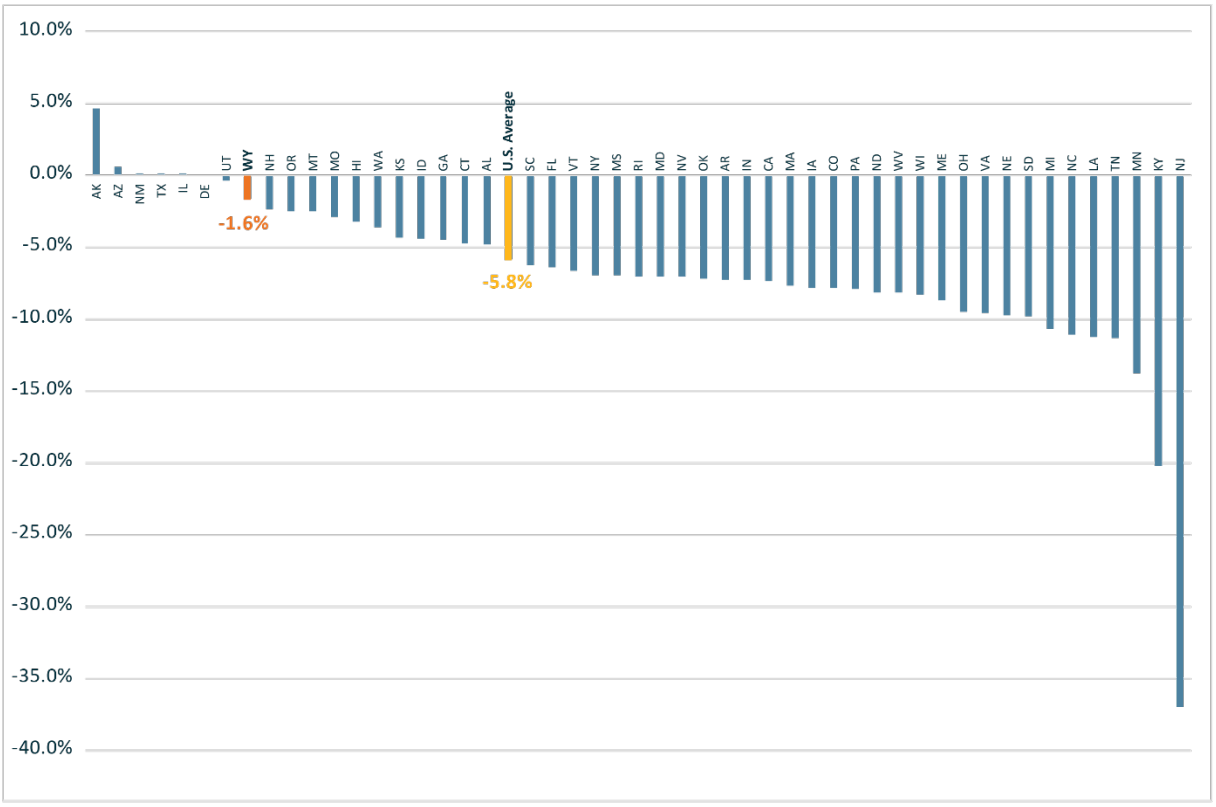
Figure 8-7: Wyoming's Change in Average Seats Per Departing Commercial Airline Flight



Source: Airline Data Inc.

Another benchmark that helps to provide context for Wyoming's commercial airline service is the state's average one-way airfare. As shown in **Figure 8-8**, between 2015 and 2019 Wyoming's average domestic one-way airfare decreased by 1.6 percent. Average one-way air fares for all commercial airports in the United States decreased by 5.8 percent over this timeframe. As **Figure 8-8** reflects, Wyoming's rate of decrease for its average one-way commercial airline fare was among the lowest of all states.

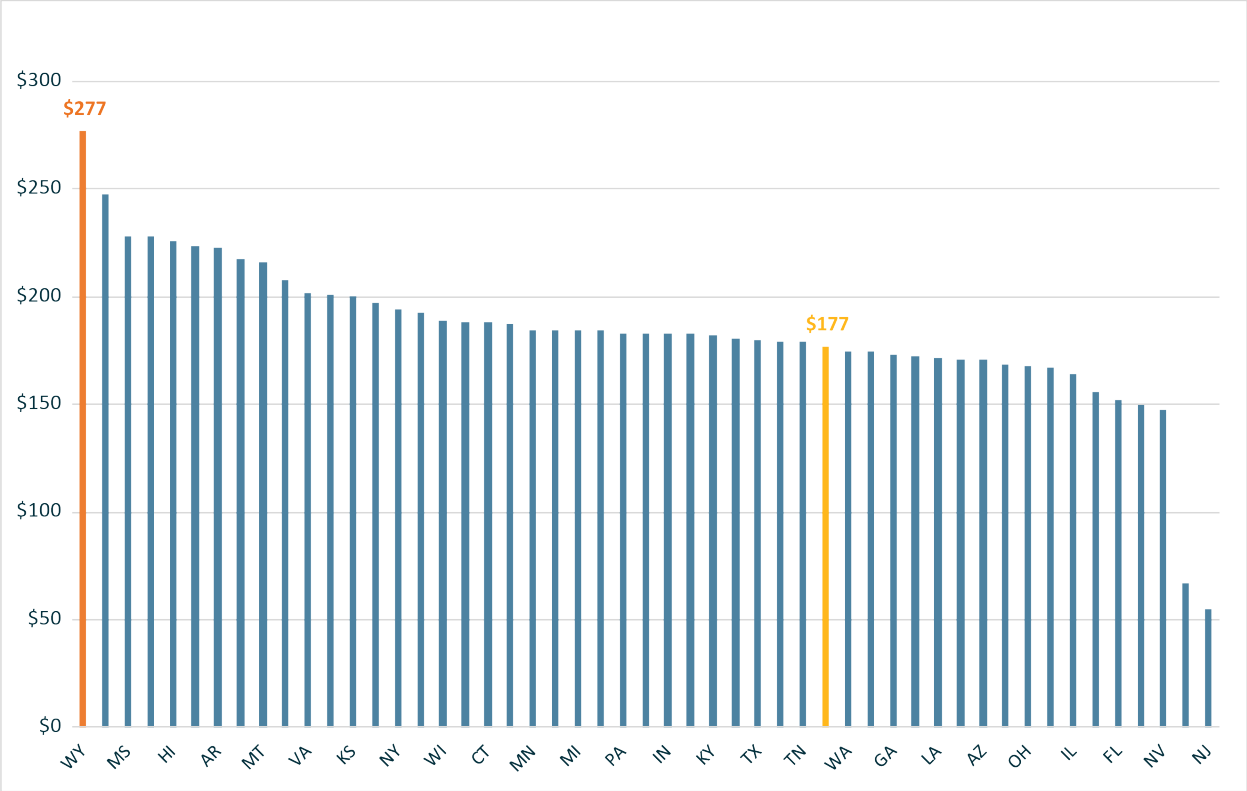
Figure 8-8: Percent Change by State in Average One-Way Airfare



Source: U.S. Bureau of Transportation Statistics

While Wyoming has had some success in lowering the state's average one-way airfare, Wyoming's one-way average commercial airline fare is $277, highest among all states. The average fare in the United States is $177, notably under Wyoming's average. Comparative average one-way commercial airfares for all states are depicted graphically in **Figure 8-9**.

Figure 8-9: Average One-Way Commercial Airline Airfare by State



Source: U.S. Bureau of Transportation Statistics

Information previously presented in this section shows that Wyoming experiences significant passenger leakage to alternative commercial airports that are beyond the state. It is estimated that more than 55 percent of all commercial airline travelers associated with Wyoming use a commercial airport in another state for their airline travel. Fares are most likely the number one issue impacting Wyoming's passenger leakage. Leakage of commercial airline passengers beyond Wyoming to commercial airports in other states has multiple negative impacts. These are summarized as follows:

- Impacts on airport funding – commercial airports receive annual entitlement funding from the Federal Aviation Administration (FAA); the allocation of these funds is formula-based and is driven by each airport's number of actual annual commercial passenger enplanements. In addition, commercial airports can levy a Passenger Facility Charge (PFC); this charge must be approved by the FAA, and the amount varies by airport. With an estimated 55 percent of Wyoming's commercial airline travelers using an airport in another state, funding for the state's commercial airports is adversely impacted by passenger leakage.
- Impacts on airport revenues – commercial airports generate income from businesses that operate at the airport and customers that use the airport. Concessionaires in the terminal building and rental car companies that operate at the commercial airports are examples of business tenants that airports collect operational fees and rental income from. With an estimated 55 percent of Wyoming's commercial airline travelers leaking to airports in other states, Wyoming airports are able to support fewer airline-related businesses; and as a result, have lower revenue streams from both businesses tenants and commercial customers.

- Impacts on scheduled commercial airline service – levels of airline service are driven by passenger demand. With 55 percent of Wyoming's commercial airline travelers using airports in other states, Wyoming airports are impacted in their ability to support larger commercial aircraft with higher seating capacities and in their ability to support increased flight frequencies. Passenger leakage for some airports may also impact the attractiveness of the Wyoming airports for some carriers, and the airport's ability to support service to new destinations.
- Effects on economic impacts – a previous section isolates the economic impacts for each of the nine commercial airports that are airline related/supported. While the economic impacts reported in this section of the WYDOT study are significant, with a decrease in the leakage of the state's commercial airline travelers, the reported impacts could be greater.
- Lost tax revenue – as study analysis determined, airline functions supported by the nine commercial airports support annual state and local sales tax revenues that are estimated at almost $75 million. This tax revenue is generated by the 45% of all Wyoming associated commercial airline passengers who use a Wyoming commercial airport for their airline travel. If the 55% of Wyoming's leaked passengers that use airports in other states used a Wyoming airport instead, annual tax revenues could for state and local governments could exceed $150 million.

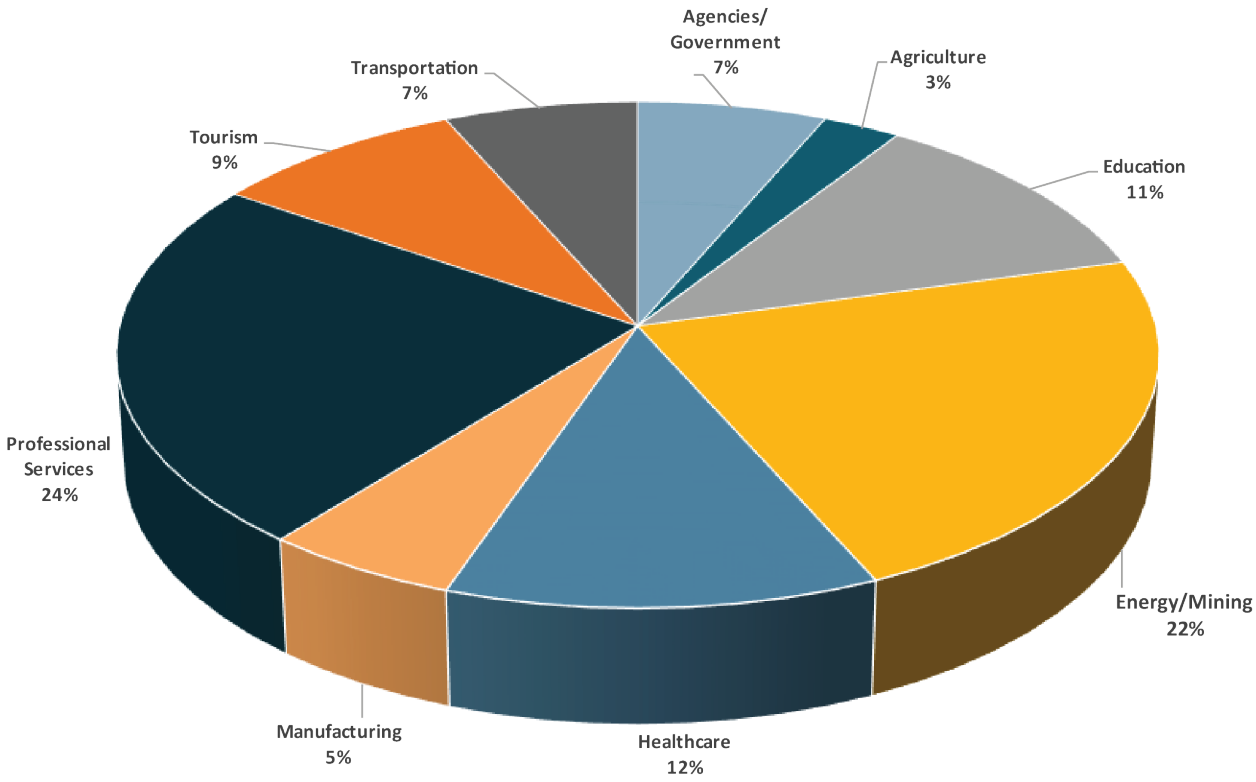
8.6 Importance of Commercial Airline Service in Wyoming

As this section has demonstrated, there are significant annual economic impacts and sales tax revenues that are associated with commercial airline functions at the nine Wyoming commercial airports. In additional to these benefits, which can be quantified and measured, Wyoming's residents, businesses, and visitors realize other benefits from commercial airline functions. A high-level overview of some of these benefits follows:

Business Efficiency – Businesses in Wyoming and businesses visiting Wyoming rely on and benefit from the state's commercial airline service. Businesses rely on airline service so that their employees can travel to both domestic and international destinations. When Wyoming businesses have the need for travel beyond the state, there simply is no substitute for the efficiency and time savings provided by commercial airline travel. Businesses that are based in Wyoming have customers and suppliers, based elsewhere, who frequently travel to Wyoming to see them. Scheduled commercial airline service affords these visiting businesses ready and timely access to the state. Businesses in Wyoming opt to depart from their local Wyoming airport because of the convenience and overall cost savings these local airports provide. When businesses use commercial airports in Wyoming, they significantly reduce their drive/travel time to their departure airport; they often avoid auto parking fees; and they have more predictability in terms of TSA processing time.

Depending upon the airport, surveys completed for this study show that the percent of business travel ranges from a high of about 60% to a low of approximately 15%. The cumulative average for business travel among all commercial airports is significantly impacted by the number and the high percentage of leisure-related travelers that arrive in Wyoming via the Jackson Hole Airport. **Figure 8-10** provides information, that was gathered for this study, showing the types of businesses that most frequently use commercial airline service at Wyoming's commercial airports. As this figure shows, businesses in the energy and mining industries and those providing professional services account for the highest percentage of business-related trips. Professional services primarily include businesses traveling for legal/law firms, communications and IT companies, engineering/consulting firms, and companies providing financial services.

Figure 8-10: Types of Business Travel Supported by Wyoming's Commercial Airline Service



Connectivity – Many Wyoming residents depend on commercial airline service to stay connected with their families and friends. While electronic communication has become increasingly more commonplace, it does not replace actual face-to-face meetings. Statewide for all airports, reported airline trips to see friends and family account for almost 10% of all airline trips.

Healthcare – Wyoming residents sometimes use scheduled commercial airline service to travel, primarily either to Salt Lake City or Denver, for advanced medical treatment. Sometimes residents are either unable or unwilling to drive longer distances for their medical treatment. Airline service provides an alternative means of travel for those seeking medical services beyond the state.

Tourism – Tourism is a very important component of Wyoming's economy. Wyoming attracts visitors from other states, as well as international cities. Almost 520,000 visitors come to Wyoming annually on a commercial airline flight. These visitors are attracted to Wyoming's national parks, resorts, ski areas, guest ranches, hunting/fishing opportunities, and back-country experiences. Without the convenience provided by commercial airline service, these travelers could choose to vacation elsewhere. Statewide for all airports, 70 percent of all annual enplanements are related to visitors who come to Wyoming on a commercial airline flight.

Economic Development – The Wyoming Business Council and other local and regional economic development groups travel extensively to locations throughout the U.S. and abroad in order to attract businesses and high-quality jobs to Wyoming. Scheduled commercial airline service is an important factor for successfully recruiting and retaining qualified employees for Wyoming businesses. Without scheduled commercial airline service, efforts to attract and maintain jobs for Wyoming residents would be adversely impacted.

Commercial airline service is very important to so many aspects of Wyoming and the state's economic well-being that the state has its own program to help support commercial airline service. This program is the Wyoming Air Service Enhancement Program (ASEP). In 2016, WYDOT conducted a study to measure the return on investment (ROI) from the ASEP. The 2016 ROI analysis was updated in conjunction with WYDOT's 2020 Aviation Economic Impact Study. **Appendix B** to this report includes the updated ROI analysis.

9. Statewide Estimates of Jobs Benefiting from Airports

The WYDOT study estimated all direct aviation-related impacts that are supported by the 34 commercial and general aviation study airports. As these direct impacts ripple through the state's economy, economic impacts (jobs, payroll, spending, and economic activity) in other industrial sectors are supported. These impacts are measured in the WYDOT study and are reported as indirect/induced impacts. As part of the study's analysis, the IMPLAN model was used to show which industrial sectors benefit from the impacts that are generated by study airports.

In addition, there are other jobs in the state that rely on and gain significant efficiency from the public airports. These are jobs that would be adversely impacted if air travel, supported by the Wyoming airports, were not available. These jobs are in addition to those that have been identified through the previously completed data collection and modeling process. IMPLAN helps to identify these additional non-aviation jobs that the study airports support.

9.1 Economic Impacts by Industrial Sector

The North American Industry Classification System (NAICS) is the standard used by federal statistical agencies to classify business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the United States business economy. The system groups similar areas of the economy into sectors for the purpose of mapping connections between interdependent industries. Total jobs and economic activity associated with aviation in Wyoming flows from the airports and benefits other sectors of the state's economy. As part of the WYDOT economic impact analysis, the IMPLAN model was used to distribute total statewide economic impacts to the NAICS sectors where aviation-related impacts are realized in Wyoming's economy.

In the WYDOT study, total annual economic impacts start with direct impacts supported by each airport. As direct impacts enter the state's economy, additional indirect and induced impacts (also referred to as multiplier impacts) are created. Combined, the direct, indirect, and induced impacts represent all economic impacts associated with public airports in the state. The IMPLAN model provides a function that helps to show, by industrial sector, which industries benefit from the total economic impacts that are associated with the study airports. In this analysis, total employment and total annual economic activity (spending plus payroll) are used to report on which industries realize the airport-supported economic impacts.

Table 9-1 represents the sectors in which total statewide economic impacts identified in the WYDOT study are realized in Wyoming's economy. Economic activity reflects total payroll and spending.

Table 9-1: Statewide Aviation Related Economic Impacts by Industrial Sector

Code	Sector	Total Employment	Total Economic Activity
11	Agriculture, Forestry, Fishing and Hunting	9	$513,300
21	Mining, Quarrying, and Oil and Gas Extraction	18	$7,475,500
22	Utilities	46	$40,976,500
23	Construction	327	$47,858,200
31-33	Manufacturing	570	$167,881,500
42	Wholesale Trade	141	$33,017,200
44-45	Retail Trade	3,679	$161,513,600
48-49	Transportation and Warehousing	657	$114,991,900

Code	Sector	Total Employment	Total Economic Activity
51	Information	151	$37,441,300
52	Finance and Insurance	482	$83,901,700
53	Real Estate and Rental and Leasing	1,530	$291,298,200
54	Professional, Scientific, and Technical Services	437	$43,672,500
55	Management of Companies and Enterprises	111	$12,046,900
56	Administrative and Support and Waste Management and Remediation	642	$41,574,600
61	Educational Services	41	$1,797,200
62	Health Care and Social Assistance	392	$34,687,300
71	Arts, Entertainment, and Recreation	130	$6,462,100
72	Accommodation and Food Services	10,976	$668,561,300
81	Other Services	446	$33,719,800
92	Public Administration	1,189	$194,311,200
	Total	**21,974**	**$2,023,701,800**

Source: Jviation

9.2 Non-Aviation Jobs Relying on Aviation

This study indicates that when direct plus indirect/induced employment, supported by the 34 study airports is considered, there are 21,974 airport-supported jobs statewide. These jobs are associated with airport management, aviation-related business tenants, investment that takes place to support capital improvement projects, and expenditures from visitors to Wyoming who arrive on scheduled commercial flights and on general aviation aircraft.

These jobs, however, are not the only jobs that rely on the airport system; throughout Wyoming there are many other jobs that depend on and gain efficiency from using the study airports. General aviation, scheduled commercial airlines, and air cargo/freight support many types of employers and employment in Wyoming. This study documented many non-aviation businesses in Wyoming that use general aviation as an important business tool. Many of these same non-aviation businesses also gain efficiency from using commercial airline service.

Driving distances between many Wyoming communities are long, and travel times can be compounded by weather and terrain. As an example, a business needing to travel from Evanston to Newcastle would have a roundtrip drive time of about 14 ½ hours. If the same trip is made on a general aviation business jet, the roundtrip travel time is reduced to about 2 hours, and if the roundtrip is made on a twin-engine general aviation plane the travel time is about 4 hours. Either way, aviation turns a business trip that would be easily be more than two days into one day of travel.

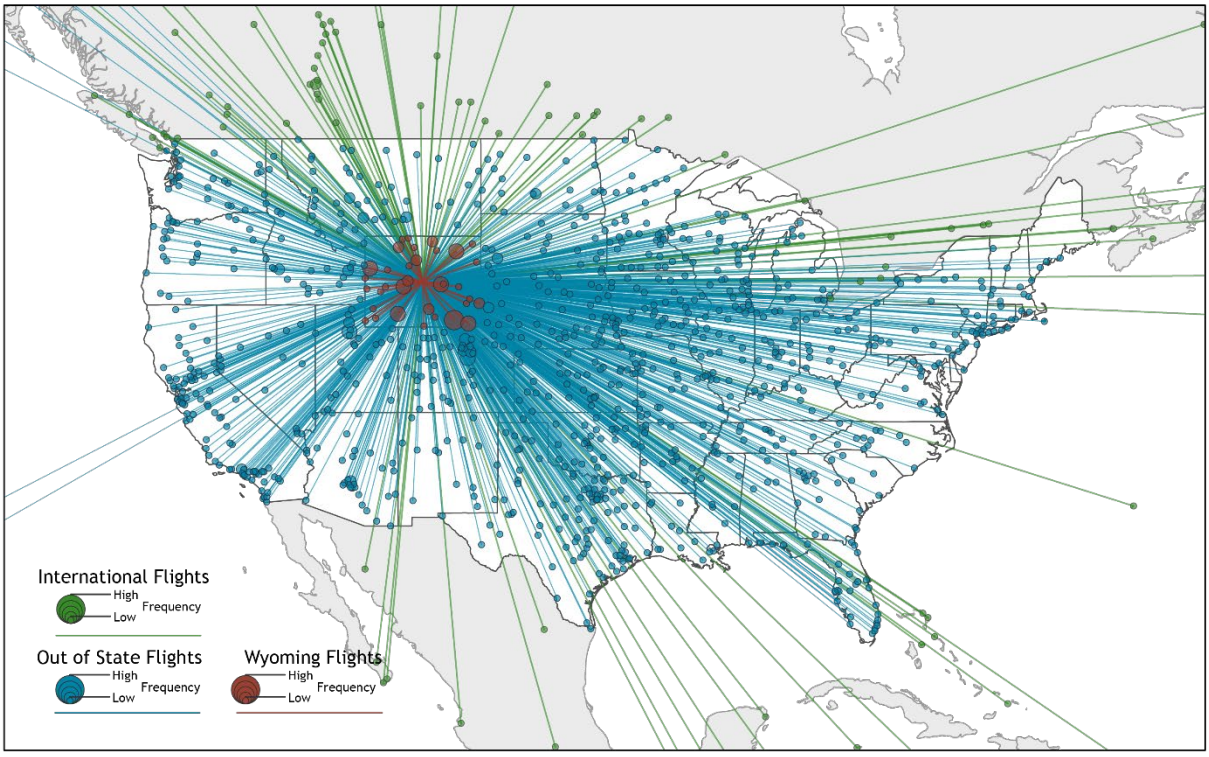
General aviation is often used to tie together offices of Wyoming-based businesses that are in different locations, either within or beyond Wyoming. As noted, corporate flights on general aviation aircraft can reduce employee travel time from days to hours, improving company and employee productivity. Instate general aviation flights by Wyoming-based businesses are common and frequent. Construction companies are a good example of businesses that rely on general aviation travel; these companies often have large-scale

development projects going on simultaneously in different locations. General aviation flights enable construction companies to fly conveniently from site to site to monitor various aspects of project development and implementation. Employers in Wyoming's energy and mining industries are good examples of companies that frequently rely on and benefit from general aviation travel.

Figure 9-1 helps to provide insight into how general aviation flights support businesses throughout Wyoming and how the study airports help to support additional jobs/employment in the state. This map reflects FAA flight data from the National Offload Program for general aviation aircraft operations arriving and departing the study airports. This map helps to show that airports connect Wyoming businesses to other destinations in Wyoming and in the U.S., as well as to international cities. Wyoming companies who use general aviation to support their business travel have many employees whose jobs are dependent on and benefit from the study airports.

According to FAA flight data, and as **Figure 9-1** reflects, a notable percent of all FAA recorded flights taking off from or landing at a Wyoming airport, 27%, are from one Wyoming airport to another. General aviation provides a convenient and often used alternative mode of travel for Wyoming businesses and agencies that have instate travel needs.

Figure 9-1: FAA Annual General Aviation Flight Data for All Study Airports



Agency outreach conducted as part of the study shows that economic development agencies, state, regional, and local, all rely on aviation as a tool to retain and recruit employers and employees to the state. According to *Site Selection Magazine* that ranks states for their competitiveness to attract economic development, airport proximity and access to commercial airline service are important factors that businesses consider when they are contemplating expansion or relocation. Many Wyoming-based businesses have employees who regularly travel by air.

For many non-aviation employers, commercial airline flights are an integral tool for employees that need to travel as part of their job. Access to an airport with scheduled commercial airline service or a business-ready general aviation airport is often critical to a company's ability to effectively operate. Companies use aviation to visit their clients, vendors, and suppliers, thereby expanding their market areas. They also may rely on the airports for supply chain management and logistics, depending upon the type of businesses. Employees throughout the state who rely on commercial airline travel or on just-in-time delivery of parts and supplies are aviation dependent.

Airports support just-in-time supply chain management for all types of businesses in the state. Many freight forwarders and companies that facilitate actual ground delivery of air shipments are not located on an airport. Jobs for these types of companies are also aviation dependent. Sometimes shipments come on general aviation or commercial aircraft, and other times they are carried by companies dedicated to shipping air cargo and freight. There are jobs in Wyoming related to air cargo/freight activity that are not physically located on a study airport, but these jobs are airport dependent.

Colleges and universities use general and commercial aviation as tools to expand their recruitment areas. They support fundraising or philanthropic activities using flights from public airports. Staff from Wyoming-based colleges and universities use aviation to travel for training and to attend conferences. College and university sports teams also often rely on flights from the airports. Employees of many local school districts in Wyoming also report that they frequently rely on air travel to support their jobs.

Surgeons and doctors also use airports. It is not uncommon for teams of physicians to rely on aviation to support life-saving transplants, and shipment of organs by air is commonplace. In Wyoming, local hospitals and clinics rely on physicians who fly to the community to visit with patients locally. Wyoming's healthcare system relies on aviation as a way to recruit and retain medical professionals. Without the efficiency of air travel, healthcare services could not be as easily transported around the state, and the state's ability to retain physicians would be negatively impacted.

Not only do Wyoming-based businesses rely on and benefit from the study airports, but many state agencies also rely on general aviation to carry out their duties and responsibilities more efficiently when traveling in the state. Employees of various local, state, and federal agencies rely on aviation/airports to carry out their missions and responsibilities. Agencies charged with protecting the environment, wildlife, and natural resources often rely on airports. Agencies responsible for aerial firefighting, such as the Bureau of Land Management, Forest Service, and National Guard, are dependent on the study airports to support their efforts.

Farmers and ranchers throughout the state depend on aviation. They rely on airports for aerial applications to control weeds and fight pests and predators. Employees in these industries sometimes have their own air travel needs. Airports support heard observations and searches for lost cattle, along with just-in-time shipments of parts for broken farm equipment. Many jobs in Wyoming's agricultural industry are aviation dependent.

The IMPLAN model provides information that is used to estimate the number of additional jobs statewide that have improved efficiency as a result of general aviation, commercial aviation, and air cargo. Analysis shows that there are an estimated 6,500 jobs in Wyoming that have improved efficiency from their reliance on the study airports. These jobs are in addition to the previously estimated airport and visitor-supported jobs from all study airports.

When these additional jobs are combined with the 21,974 jobs that were previously estimated through the study's economic impact analysis, almost nine and half percent (9.5%) of Wyoming's employment is supported by or is reliant on the study airports. The next section of this report provides case studies that help demonstrate some of the specific ways that the study airports support Wyoming and its residents and businesses.

10. Case Studies

The previous section of this report showed which industrial sectors in Wyoming realize the economic impacts associated with the study airports and reported on additional non-aviation jobs throughout the state that gain significantly in efficiency from relying on the study airports. This section of the report summarizes research that shows specifically how aerial applicators, aerial firefighting activities, and hospitals/emergency service providers (EMS) rely on the study airports. In addition, the results of outreach to state, regional, and local agencies is summarized, showing which agencies indicate they benefit from the Wyoming airports and, in some instances, reporting on how the agencies are using study airports.

10.1 Case Study on Aerial Applicators in Wyoming

Agriculture is one of the top three industries in Wyoming, accounting for $2 billion each year in cash receipts.[2] Most of Wyoming's agricultural production is in livestock and animal products (75 percent), as **Table 10-1** shows. Hay is the state's largest crop followed by corn and sugar beets.

Table 10-1: Wyoming Top Agricultural Commodities, 2018

Rank	Commodity	State Receipts ($000)	Percent of Total Receipts
1	Cattle and calves	942,966	61.0
2	Hay	219,039	14.2
3	All other animals and products	81,795	5.3
4	Hogs	57,122	3.7
5	Miscellaneous crops	50,030	3.2
6	Corn	34,932	2.3
7	Sugar beets	33,351	2.2
8	Chicken eggs	29,009	1.9

[2] Source: USDA, Economic Research Service

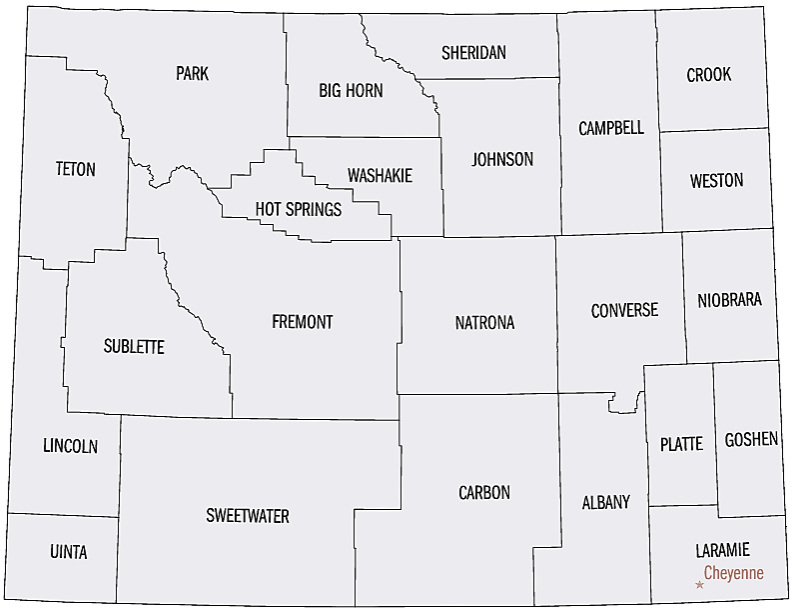
Rank	Commodity	State Receipts ($000)	Percent of Total Receipts
9	Dairy products, milk	22,934	1.5
10	Barley	21,357	1.4
11	Dry beans	18,240	1.2
12	Wheat	16,348	1.1
	Top 12 Commodities	**1,527,123**	**98.8**
	All Commodities	**1,545,779**	**100.0**
	Animals and products	**1,151,329**	**74.5**
	Crops	**394,450**	**25.5**

Source: USDA/ERS Farm Income and Wealth Statistics

In 2019, there were approximately 12,000 farm or ranch operations extending over 29 million acres or 49 percent of the state. At an average size of 2,430 acres per farm, Wyoming ranks #1 for the largest farms and ranches in the United States.

While every county in the state has ranches or farms, several counties standout as lead producers. In terms of market value for agricultural products sold, two counties are the largest – Goshen and Laramie, located in the southeast corner of the state, adjacent to Nebraska and Colorado, respectively. Platte County, to the west of Goshen, is the third largest agricultural producing county**.** These three counties produce primarily livestock, poultry, and their related products and by-products. The northwest counties of Park and Fremont are also among the top five producers, however, for crops. These counties make up a large share of agricultural products sold. Together the top five counties account for 44 percent of the market value for all Wyoming agricultural products sold. To locate the counties, **Figure 10-1** shows Wyoming counties; **Table 10-2** shows the top counties in terms of number of farms, agricultural acreage, and market value of agricultural products.

Figure 10-1: Wyoming Counties



Source: USGS county-map reference image (from US Government website):
http://wy.water.usgs.gov/pubs/statebiblio/bibliomap

Table 10-2: Top Wyoming Counties in Agricultural Production

Rank	Counties	Communities	Airport Code	Number of Farms	Acres of Land in Farms	Acres per Farm	Market Value of Agricultural Products Sold ($000)
1	Goshen	Torrington	TOR	842	1,256,099	1,492	$201,878
2	Laramie	Cheyenne, Pine Bluffs	CYS, 82V	999	1,629,655	1,631	$184,577
3	Platte	Guernsey, Wheatland	GUR, EAN	505	1,046,754	2,073	$94,232
4	Park	Cody, Powell	COD, POY	1,008	929,926	923	$85,174
5	Fremont	Lander, Dubois, Riverton	LND, DUB, RIW	1,152	1,165,154	1,011	$82,427
6	Carbon	Rawlins, Saratoga, Dixon	RWL, SAA, DWX	345	2,811,832	8,150	$73,241
7	Campbell	Gillette	GCC	643	2,901,210	4,512	$69,897
8	Sheridan	Sheridan	SHR	833	1,213,820	1,457	$59,674
9	Converse	Douglas	DGW	384	2,593,514	6,754	$56,347
10	Crook	Hulett	W43	554	1,465,641	2,646	$52,936
11	Albany	Laramie	LAR	451	1,406,745	3,119	$50,819
12	Niobrara	Lusk	LSK	242	1,277,446	5,279	$49,683
13	Johnson	Buffalo	BYG	384	1,974,363	5,142	$44,146
14	Natrona	Casper	CPR	430	1,933,264	4,496	$43,213
			Subtotal	**8,772**	**23,605,423**	**2,691**	**$1,148,244**
			Total Wyoming	**11,938**	**29,004,884**	**2,430**	**$1,472,113**
			Subtotal Share	**73%**	**81%**		**78%**

Source: USDA, NASS, 2017 Census of Agriculture

10.1.1 Role of Aerial Applicators in Wyoming

Given the large amount of land dedicated to cattle ranches, it might not be surprising to learn that aerial applicators play an important role in both crop protection and improvement of grazing lands.

Aerial applicators perform many vital tasks, noted below[3]:

- Seed crops at the beginning of the season and midstream seed cover crops
- Fertilize crops, rangeland, and forests
- Protect crops/forests against diseases and pests
- Mitigate weed growth
- Control mosquitoes
- Support aerial firefighting

> "Sheridan county is cattle country. We have very few commodity crops, so all of our inputs are geared toward hay/silage production or to improving grazed range lands. Without protection provided by aerial pesticide applications much of our crops and grasslands would be unusable due to insect or weed pressure. Due to terrain and timing issues, often the only option for an application is by air."
>
> Bighorn Airways, Inc.

[3] *Aerial Application – Agriculture's Soaring Superheroes*, My Job Depends on Ag, March 31, 2017

Nationwide, there are approximately 1,560 aerial application businesses; 87 percent of these businesses are owned by pilots. Aerial application services are available in every state, but owners, pilots, and support staff often travel to different states during their growing seasons. Some independent pilots work both the north and south to take advantage of the different seasons and extend the months they can work. It is a tight knit community, and jobs are often posted on social media sites. Pilots have essential skill sets that include:

- A commercial pilot license and registration as a commercial pesticide applicator in states where the operator works.
- An FAA Part 137-1B certificate to operate an aerial application business, including skills to fly at low altitudes and avoid obstructions (e.g. wires and structures), as well as experience adjusting flying and aerial applications to account for air speed, wind, temperature, and weather.
- Knowledge of essential pesticides, fertilizers, or fungicides and the ability to safely mix chemicals.
- Knowledge of seeding protocols for initial planting and cover crops.

> "Aerial application is a critical component of high-yield agriculture. High-yield agriculture, which includes the responsible use of crop protection products, benefits the environment by producing maximum crop yields from fewer acres. Some farmers and ranchers apply their products from the ground using ground equipment, but many have realized that using an ag plane to do this work is often more efficient and effective. For example, aircraft can treat wet fields and spray when crop canopies are too thick for ground rigs. Unlike ground rigs, aerial application does not contribute to topsoil runoff. Moreover, when pests or disease threatens a crop, time is critical. At a minimum, an airplane or helicopter can accomplish three times as much application work as any other form of application."
>
> Dean McClain
> Ag Flyers, Torrington, WY

Aerial applications have situational advantages. It is often the most effective way to apply pesticides in a timely manner. It permits large and often remote areas to be treated rapidly. When wet soil conditions exist, rolling terrain and dense plant foliage can prevent other methods of treating an area; aerial application may be the only remaining (and preferred) method of treatment. Aerial applications are non-disruptive to crops, treating above the fields and not within it. Aerial application does not cause soil compaction; hence, it minimizes soil runoff.

Today's aerial applicators run sophisticated operations. The aircraft they fly have come a long way since the industry began in the 1920s. Turboprop aircraft can carry approximately 800 gallons of treatment in their application tanks. These aircraft can fly over a field or grazing range at low altitudes up to 140 miles per hour. Aircraft utilize GPS technology for precision applications, and sophisticated dispersal systems that monitor flow rates help to assure the precise amount of product application.

10.1.2 Aerial Applicators in Wyoming

Wyoming has 29 million acres of land in ranches and farms. In 2019, 52 individuals or companies applied for aerial applicator licenses with the Wyoming Department of Agriculture. Of these licensees, 21 or 40 percent are in-state operators; the main out-of-state operators identify Utah (10 percent), Nebraska (10 percent), and Colorado (8 percent) as their home state. The remaining operators come from many different states as shown in **Table 10-3.**

Table 10-3: Home State of Aerial Applicators with Wyoming Licenses, 2019

Home State	Number of Companies or Individuals
Wyoming	21
Nebraska	5
Utah	5
Colorado	4
Kansas	3
Montana	3
Idaho	2
Arkansas	1
Florida	1
Iowa	1
Nevada	1
Oklahoma	1
South Dakota	1
Virginia	1
Washington	1
Total	**52**
In-State	**21**
Out-of-State	**31**

Source: Wyoming Department of Agriculture

To obtain additional information about aerial applicators and their businesses, this economic impact study conducted two outreach efforts, a survey to aerial applicators and an airport tenant survey that obtained information from aerial applicators based at Wyoming airports. In addition, the National Agricultural Aviation Association (NAAA) published results from a 2018 national survey of operators; in this survey, pilots provided a national baseline about the industry which is used in this study.

10.1.3 About the Aerial Applicator Survey

An online and mail-out survey was sent to the 52 companies or individuals who had obtained one or more licenses from the state of Wyoming in 2019 to provide aerial application of seed, fertilizer, and/or pesticides. Of these, 20 companies responded to the survey for a 38.5 percent response rate, and 6 of the 20 respondents were from Wyoming. The survey asked questions about types of aerial flights conducted, airports used, acreage covered, staffing, and travel patterns.

Surveys of aerial applicators who are business tenants at the study airports were completed as part of the economic impact study. These surveys concentrated on employment, payroll, and spending at specific airports where the applicator is a tenant. Six applicators responded to the tenant surveys; two of these also filled out the online aerial application survey.

Figure 10-2: Public Airports with Paved Runways That Aerial Applicators Base or Visit

10.1.4 Airports Where Aerial Applicators Work

Figure 10-2 shows all the public airports, with paved runways, where survey respondents indicate they either base their operations or use a study airport on a transient/visiting basis. In addition, Cokeville Municipal Airport (U06) and Greater Green River Intergalactic Spaceport (48U) (with dirt or gravel runways) also are used by aerial applicators. The airports are spread throughout the state but are concentrated where farms and ranches are most active producers**.** See **Table 10-2** information on farm concentrations**.**

In the NAAA national survey, of the 548 operators reporting, 316 or 58 percent have operations based on private property and 232 (42 percent) are based at public airports. In Wyoming, reliance on public airports is greater. Of the six aerial applicators based in Wyoming, four are based at public airports; of the total sample of respondents, 12 out of 20 based their operations at public airports; and when performing aerial applications, all operators use the public airports shown on **Figure 10-2**.

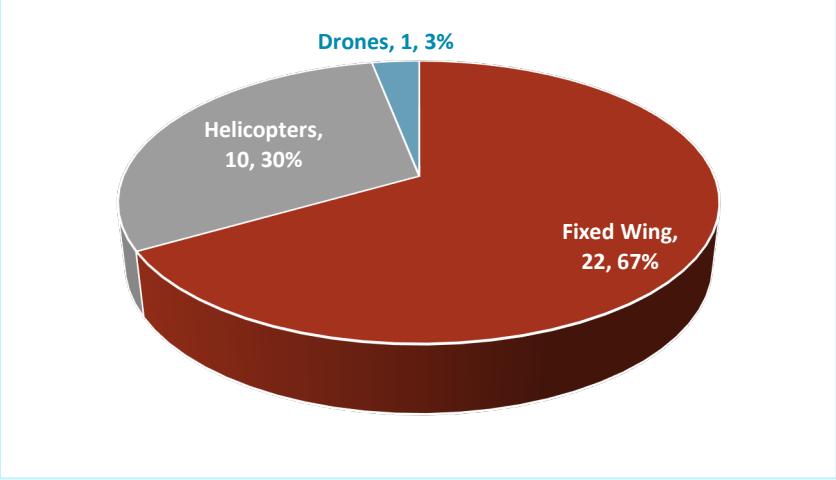
Sometimes when these operators are in different communities, they have overnight expenses; others worked daily from other airports but have no overnight travel/expenses. From survey responses, a total of 345 overnights were reported with average expenditures of $77 per day.

10.1.5 Aerial Applicator Aircraft Using Wyoming Airports

Nationally, aerial applicators use a combination of fixed wing aircraft and helicopters to perform aerial applications. According to the NAAA survey, most operators use one or two aircraft during normal seasonal operations. Fixed wing aircraft (84 percent) far outnumber helicopters (16 percent) in the combined fleet.

Aerial operators serving Wyoming indicated using 33 different aircraft in Wyoming during 2019. Of these, 10 or 30 percent were helicopters; 22 or (67 percent) were fixed wing, and one provider used a drone for remote sensing and application of fertilizers or pesticides. Six (6) aerial applicators flew one fixed-wing aircraft during normal operations in Wyoming; four (4) operators flew two fixed-wing aircraft, and two (2) companies flew four (4) fixed-wing aircraft. Six helicopter operators used a single aircraft, while two (2) operators had two helicopters. **Figure 10-3** summarizes this operational fleet mix information.

Figure 10-3: Number of Aircraft and Helicopters Used for Aerial Operations in Wyoming in 2019



Source: Aerial Applicator Survey (2020)

Source: 307 Aviation, LLC, Worland WY

10.1.6 Aerial Applicator Services Provided in Wyoming

Table 10-4 shows the different aerial application services indicated by the 20 survey respondents. **Table 10-5** lists the crops treated in Wyoming by the 17 aerial applicators that answered this question on the study survey. Pastures, range land, and hay are the top crops treated, affirming the importance of livestock and feed as the major agricultural activities in the state.

Table 10-4: Aerial Application Services Reported by Respondents

Aerial Application Services	Yes Responses	% of Sample
Protect crops with disease control products	15	75%
Rangeland weed control and mitigation	15	75%
Feeding or fertilizing	11	55%
Seeding crops and/or cover crops	9	45%
Public health spraying	8	40%
Pest Control (insects, grasshoppers, crickets)	5	25%
Forestry seeding, fertilizing, and protection	4	20%
Firefighting	3	15%
Number of Survey Respondents	**20**	**100%**

Source: Aerial Applicator Survey (2020)

Table 10-5: Crops Treated by Aerial Applicators in Wyoming during the 2019 Season

Crops Treated	Yes Responses	% of Sample
Pastures and range land	14	82%
Hay or alfalfa	12	71%
Corn	7	41%
Dry beans	5	29%
Small grains (wheat/barley)	5	29%
Roots and tubers (potatoes, sugar beets, onions, bulbs)	4	24%
No crops/only mosquito control	3	18%
Cover crops	2	12%
Organic crops	2	12%
Leafy vegetables	1	6%
Number of Survey Respondents	**17**	**100%**

Source: Aerial Applicator Survey (2020)

Aerial spraying has also been used extensively in Wyoming by managers of the national forests. As of 2019, cheatgrass had spread rapidly at a rate of 20 percent per year across the western states, crowding out other plants and allowing wildfires to spread more easily. Bridger Teton National Forest managers and the Wyoming Game and Fish Department have been managing cheatgrass using aerial spraying techniques in multiple areas of the state. Several aerial applicators indicated that they were involved in efforts to eradicate cheatgrass.

Cheatgrass is an annual invasive plant that crowds out native plants

Why is cheatgrass bad?

"Wildfires, for one. Unlike perennial native grasses, cheatgrass is an annual grass that grows in the spring and then dies off between late April and June, depending on local precipitation patterns. And it happens to die just in time to provide fuel for the Wyoming's fire season.

Cheatgrass dries out much earlier than native vegetation, significantly lengthening the historic fire season. Plus, cheatgrass has very fine leaves and stems, which makes it ignite easily and causes fire to spread rapidly. Cheatgrass plants also grow very close together (up to 10,000 plants in a square-meter), creating a continuous fuel base. Cheatgrass is comparable to tissue paper covering the landscape — an easily-ignited fuel that carries fire quickly and spreads it rapidly.

Since native plant communities are not adapted to frequent wildfires, these fires create even more cheatgrass-dominated rangelands. Cheatgrass is adapted to efficiently use the increased nitrogen in the soil after a fire, and it invades empty spaces created by the fire."

Source: Sage Grouse Initiative

10.1.7 Aerial Applicator Employment in Wyoming

Aerial applicators work the growing season. Many are family or individually-owned businesses that hire pilots or assistants during to support seasonal operations. Wyoming's growing season is relatively short, an average of 125 days. In contrast, Colorado's growing season is 152 days and Nebraska's 164 days. With moveable assets, like aircraft, it makes sense that some aerial application companies travel in the region or hire help from outside the state. Of all aerial applicators surveyed and based in Wyoming, together, they account for full-time employment for over 1,300 days and seasonal work for 350 days in the state; however, not all these days are in the air. Out-of-state operators report working more sporadically in Wyoming.

10.1.8 Aerial Applicator Conclusions

Aerial applicators are important users of Wyoming's public airports. Operators travel the state during the growing season and use many of the study airports. Based on survey responses, most hours of work are done by Wyoming companies and individuals, but several aerial applicator firms that pull permits are based in states adjacent to Wyoming. During the growing season, there is significant travel around the state by those businesses providing aerial application services. As visitors or transient users, company owners, pilots, and staff purchase fuel at visited airports and spend money on lodging, food, local transportation, and retail purchases in communities where they are operating in Wyoming.

Aerial operators highlighted their contributions to Wyoming's agricultural industry with the following comments volunteered as an optional response at the end of the survey.

> "Protecting crops and rangeland help crop producers and ranchers to maximize their efficiency and return on the acres they steward."
>
> "I spray range land to help protect the beautiful Wyoming prairie from invasive cheatgrass and those pesky grasshoppers."
>
> "We support ranching by reducing invasive weeds for better grazing."

"I support the row crop farmers along the Wyoming/Nebraska border."

"We apply herbicide to control cheatgrass. Aiding in control of wildfires by reducing fuels and enhancing grazing of native grasses by livestock."

"Our business was a part of USDA's grasshopper mitigation near Casper this past year. This helped preserve ranges in Wyoming so they can continue to be productive for the ranchers that call it home. We plan to expand our operations into southern parts of Wyoming to meet farmer/rancher needs. We also are available to assist fellow aerial applicators in Wyoming if they ever get behind and need more help."

"We support crop production and ranching by helping to control noxious weeds on Rights-of-Way corridors that traverse ranch and crop land. By controlling noxious weeds, we preserve and protect both ranch and crop land from invasive species that can take over and become difficult to control."

"50 percent our work is predator control; 50 percent is weed/mosquito control. All of our profits are plowed back into Wyoming. All our taxes are paid to Wyoming."

10.2 Case Study on Aerial Firefighting in Wyoming

From 2015 to 2019, Wyoming experienced 1,401 wildland fires, a little over half (52.5 percent) were human caused; the remaining were caused naturally, primarily by lightning with a very small percentage started by spontaneous combustion of dry fuel such as sawdust and leaves. These fires burned over 495,000 acres during

these five years, but 2016 and 2018 stand out as the biggest wildfire years, accounting for 75 percent of the total acres burned.[4]

10.2.1 Wildfires in Wyoming

Wildland fire experts at the U.S. Department of Agriculture (USDA) assign fire severity and response to three basic categories:[5]

A. **Low severity fires**. The most typical fire that has a single source that local firefighting resources catch, no matter what, and extinguish. Approximately 80-85 percent of fires are low severity and are put out with on-the-ground local resources.

B. **Moderate severity fires** (also called **mixed severity**). These fires have complex combinations of high, low, and moderate severity. These types of fires would escape if not contained with an early initial attack using aircraft that drop water or fire retardants. These fires represent up to 10 percent of fires; and if they are located near communities, they are met with multi-agency fire response. The Casper Sheep Herder Hill fire in 2012 is a good example of this type of fire as is the Roosevelt Fire near Hoback Ranches in the Bridger-Teton National Forest (September 2018).

C. **High severity fires.** These fires are infrequent, but exceptionally large, usually propelled by available fuel such as beetle kill pines and high winds. Paradise, CA is an example of a high severity fire, as are the SCU Lightning Complex Fire in the southern San Francisco Bay Area (2020) and the LNU Lightning Complex in the north near Napa (2020).

Aerial firefighting is a crucial component of early fire suppression. The conventional wisdom in fighting wildfires is aviation resources should be used in the initial attack. Firefighters use aircraft both for early fire detection (reconnaissance) and early suppression to keep the conflagration in a holding pattern and buy time for the firefighters on the ground.

It is common to associate fighting wildfires with an aircraft dumping water or fire retardant on a fire. The aircraft is there to support the ground crew by trying to contain the fire. Likewise, when a helicopter or a small scooper plane dumps water directly onto an inferno, it is doing so to tamp things down before firefighters on the ground can arrive to encircle the area with firebreaks. Airplanes and helicopters

The **Sheep Herder Hill Fire** quickly spread as it jumped from tree to tree on the mountain that overlooks Casper, WY. About 150 structures and homes on the mountain's east side were threatened.

"Rick Hopf needed to go bomb a fire. The DC-10 air tanker he flew stood by … on the apron of the Casper/Natrona County International Airport … as smaller aircraft fight the flames scorching Casper Mountain.

Then the call came…a ground crew loaded the giant tanks slung under the belly of the jet with 11,700 pounds of orange fire retardant mixed with water...the two large jet engines spooled to life …. minutes later the DC-10 was aloft, turning into the fire zone.

The DC-10 is the largest aircraft available to fight wildfires. But it's not the only aerial asset flying out of the Casper airport in support of the firefighters that fought the Sheep Herder Hill Fire...also based at the airport: a BAe-146 four-engine jet; seven helicopters, including two Wyoming National Guard UH-60 Black Hawks; four single-engine air tankers (SEAT) similar to crop-dusters and two twin-engine guide planes."

The fire was contained a week later, thanks to the efforts of aerial firefighters, ground crews, support of the airport, and extensive multi-agency coordination.

Jeremy Fugleberg
Casper Star-Tribune

[4] Wildland Fire Management Information, National Interagency Fire Center.
[5] Agee, J.K. 1996. Fire regimes and approaches for determining fire history. Pp. 12-13 In: Hardy, C.C.; Arno, S.F., ed., The use of fire in forest restoration. Ogden, Utah: USDA Forest Service, Intermountain Research Station.

rarely put out forest fires. Studies were done in the late 2000's by scientists at Australia's Commonwealth Scientific and Industrial Organization where they evaluated the effectiveness of airplanes and helicopters in various firefighting scenarios and concluded that timing is everything. "I could summarize my previous research in one sentence, and that's that small fires are easier to put out than big ones," said one of the scientists doing the research, Matt Plucinski. By reaching a wildfire early, aerial firefighters increase the probability that a small, manageable fire will not become a large, unmanageable one. In this respect, he notes, the key advantage of aircraft is their speed and their ability to access remote or otherwise difficult to reach fires.[6]

Wyoming is fortunate to have been spared high severity fires in recent years, but Wyoming airports continue to serve as crucial resources for staging early fire detection (reconnaissance) and early suppression efforts to slow down a fire until ground crews can do their work.

10.2.2 Aircraft Used in Aerial Firefighting

A variety of aircraft participate in aerial firefighting with different roles. **Table 10-6** summarizes the types of aircraft used to manage wildland fires. Some of these aircraft are contracted/owned by the State of Wyoming, the military, or the U.S. Forest Service, but during the fire season, many other aircraft are contracted or leased during times of high fire activity. For Wyoming, the fire season is considered 90 days between mid-June to mid-September.

Table 10-6: Aerial Firefighting Equipment

Aircraft Type	Role	Example
Single Engine Airtanker (SEAT)	Single Engine Airtankers (SEATs) can deliver up to 800 gallons of fire retardant to support firefighters on the ground. These small airplanes can reload and operate in areas where larger airtankers cannot.	Air Tractor AT-802.
Large Airtankers	Large Airtankers (LATs) can deliver from 2,000 to 4,000 gallons of fire retardant to support firefighters on the ground.	P2V, HC-130H, BAe-146, MD-87, C-130Q, RJ85,
Modular Airborne Fire Fighting Systems (MAFFS)	MAFFS are portable fire-retardant delivery systems that can be inserted into military C-130 aircraft without major structural modifications to convert them into airtankers when needed. The Air National Guard maintain these aircraft. They are available after civilian firefighting aircraft are deployed already to a fire.	C-130 H & J
Very Large Airtankers (VLAT)	Very Large Airtankers (VLATs) can deliver over 8,000 gallons of fire retardant to support firefighters on the ground.	DC-10
Water Scooper	Water Scoopers are amphibious aircraft that skim the surface of a water body and scoop water into an onboard tank and then drop it on a fire.	Bombardier CL-415 and Air Tractor Fire Boss.
Smokejumper Aircraft	Smokejumper aircraft deliver smokejumpers and cargo by parachute for initial attack and extended support of wildland fires. Each of the aircraft can carry eight to ten Smokejumpers and their initial supply of gear.	De Havilland DH-6 300 series Twin Otter, Shorts Sherpa C-23A and SD3-60, Dornier 228, and CASA 212.
Aerial Supervision Module/Lead Plane	Aerial supervision modules/lead planes coordinate, direct, and evaluate airtanker operations. Aerial supervision module/lead plane pilots and/or air tactical supervisors communicate with firefighters on the ground, other fire aircraft, and airtanker pilots. They release white smoke to show airtanker pilots where to drop fire retardant.	Beechcraft King Air 90 and Beechcraft King Air 200.

[6] Christopher, Ben. "Does Using Airplanes to Put out Forest Fires Actually Work?", https://priceonomics.com/does-using-airplanes-to-put-out-forest-fires/. *Priceonomics*. Retrieved July 24, 2019, paragraphs 29, 30

Aircraft Type	Role	Example
Air Attack	Air tactical or air attack planes coordinate aerial firefighting aircraft over wildland fires. They provide vital eyes in the sky for firefighters on the ground and ensure safe aviation operations.	Twin Commander 500 and 600
Type 1 Helicopter	Type 1 helicopters are the largest and can carry 15 or more passengers and up to 700 gallons of water. Maximum weight for taking off or landing 12,501 lbs. or more.	Kaman K-MAX, Sikorsky S-64 Sky Crane, S-70 Firehawk, Boeing 234 Chinook
Type 2 Helicopter	Type 2 helicopters can carry 9 to 14 passengers and carry up to 300 gallons of water. Maximum weight for taking off or landing is 6,000-12,500 lbs.	AgustaWestland 139; Eurocopter 155B1; Eurocopter EC145; Bell 212
Type 3 Helicopter	Type 3 helicopters capable of carrying 4 to 8 passengers for logistics support and carry up to 100 gallons of water or retardant. Maximum weight for takeoff or landing is up to 6,000 lbs.	Eurocopter AS-350B3; AgustaWestland AW-119 Koala; Bell 407
Resource Management	The Forest Service uses airplanes for a wide variety of other missions in managing public lands. These missions include forest health – and wildlife surveys, law enforcement, gathering infrared data, fire detection, and transporting personnel and cargo.	Cessna 206, Aero Commander 500, King Air 200, De Havilland DHC-2 Beaver, Piper Super Cub, and Cessna 185.

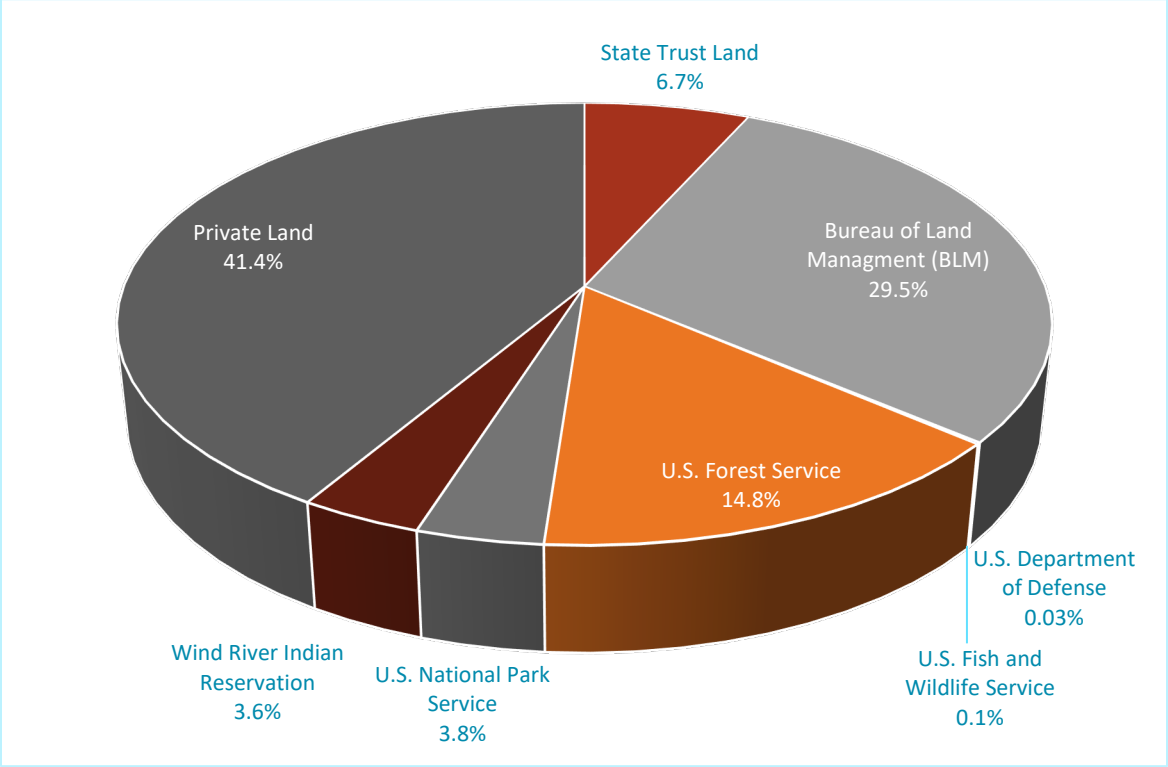
Sources: U.S. Forest Service and CAL Fire

"The Bell 212 carries up to nine people (including the pilot). It also carries firefighting tools and equipment that the crew uses once they land at an incident. This helicopter is especially useful due to the variety of missions it can perform, including water dropping, passenger transport, cargo transport, and aerial ignition," says Staci Dickson. U.S. Forest Service Aviation Officer.

10.2.3 Aerial Firefighting Responsibilities

Interagency partnerships at the federal, state, and local levels are at the heart of firefighting planning and deployment of aircraft and ground crews. There are two major reasons why coordination makes sense. First, wildfires can happen anywhere and across multiple landowners and jurisdictions. Wyoming encompasses 62.3 million acres; 48 percent of these acres are owned by different federal agencies, as shown in **Figure 10-4**. The State of Wyoming manages 4.2 million acres of Trust Land, and the Wind River Indian Reservation manages 2.3 million acres. Private land accounts for approximately 25.8 million acres spread throughout the state.

Figure 10-4: Land Ownership in Wyoming



Sources: State of Wyoming, U.S. Bureau of Land Management, and U.S. Bureau of Indian Affairs

The second reason for interagency firefighting efforts has to do with the nature of firefighting demand for intense, but short periods of times. A highly coordinated firefighting effort can utilize trained and certified flight crews and equipment across multiple agencies and geographic areas. The Bureau of Land Management (BLM) and the Forest Service adopt a multi-prong approach to aerial firefighting. They own a limited number of firefighting aircraft; sign exclusive use contracts with private aircraft owners for the fire season; and have agreements with different parties to use aircraft on a "call-when-needed' basis. Aircraft are moved around during the fire season. For example, BLM aircraft may start out in western Colorado and migrate north during the fire season.

Wyoming is relatively rich with aerial firefighting resources. The Wyoming State Forestry Division (WSFD) Helitack maintains an exclusive-use contract for a Type 3 helicopter for 120 days per year (June-September) that provides coverage seven days per week during the season. The helicopter is based at Duncan Ranch, a working cattle ranch on State Trust Lands, seven miles southeast of Glenrock in Converse County. About 90 percent of all Helitack missions are for wildfire suppression. The crew is a good example of interagency

cooperation. At the base, there are four WFSD employees, one U.S. Forest Service employee, and a BLM rotational employee.

The BLM also maintains four seasonal SEAT bases at airports in Casper, Riverton, Rawlins[7], and Greybull. Casper/Natrona County Airport and Northwest Wyoming Regional Airport in Gillette are also designated as temporary LAT/VLAT bases for DC-10 aircraft. Additional aerial firefighting capability at Southwest Wyoming Regional Airport (RKS) in Rock Springs is has recently been completed and includes a 2-acre facility and 5,000 square feet of office space.[8] This new firefighting facility is large enough to house six SEATs or possibly four SEATs and two smokejumper aircraft, space for fire retardant tanks, and as shelter for ground and flight crews.

Smokejumper in action.

The Wyoming Air National Guard, 153rd Airlift Wing, based at Cheyenne Regional Airport, has 10 crew members certified to fly C-130 Hercules aircraft equipped with Modular Airborne Fire Fighting Systems (MAFFS). The aircraft are owned by the military, but the MAFFS are owned by the Forest Service. These aircraft can drop up to 3,000 gallons of fire retardant in less than 10 seconds. The system slides into the rear of the aircraft, and the retardant is released through a nozzle on the rear left side of the plane. The 153rd Airlift Wing is one of four (4) units, each equipped with two (2) MAFFS aircraft. They are activated at the Federal level to provide surge capability when civilian resources are already engaged in firefighting. Each MAFFS mission involves a C-130 aircraft brought into combat a fire by a U.S. Forest Service lead plane.

Also located in Cheyenne on the F.E. Warren Air Force Base, the Wyoming Army National Guard frequently conducts search and rescue missions and provides firefighting capabilities using Black Hawk UH-60 helicopters. The Governor of Wyoming can activate the Army National Guard for firefighting purposes. Because helicopters are less expensive aerial resources than large and very large air tankers, they tend to be used for initial attacks on lower severity fires.

In addition to aerial firefighting resources at airports, there are also interagency regional dispatch offices located in Cody, Casper, Yellowstone National Park, and Grand Teton National Park, along with a smokejumper base in West Yellowstone, just over the border in Montana. The Yellowstone Fire and Aviation Dispatch Center manages lookouts in the Park and staffs an 8-person crew and a Type 3 helicopter to respond to wildfires and search and rescue. **Figure 10-5** shows the location of partner agencies that provide firefighting and dispatch resources in Wyoming**.**

[7] The Rawlins Seat Base is closed as of this writing due to runway maintenance on Runway 4/22.

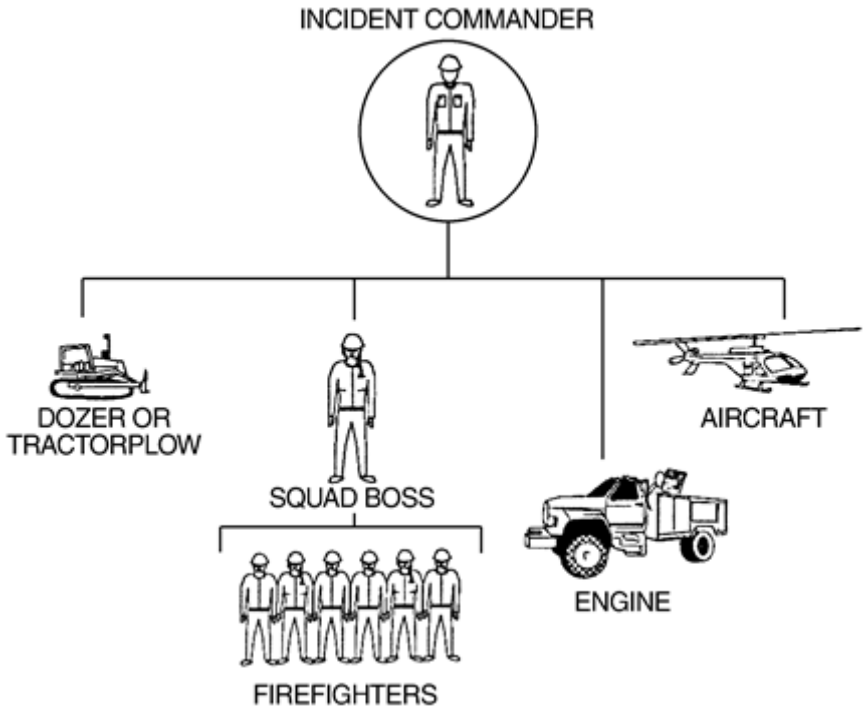
[8] Sam Ferrara, "Airport Unveils Capital Improvement Plan, Terminal Modernization and Aerial Firefighting Facility," Sweetwaternow.com, September 20, 2019.

Figure 10-5: Wyoming Interagency Firefighting Bases and Dispatch Centers

Source: Prepared by Jviation and KRAMER aerotek

The response to wildland fires in Wyoming is well-organized and explicit. Within a community, an incident is typically reported to the local fire department or County Fire Warden. If it is a low severity fire and can be handled locally, local fire suppression resources will respond. If the fire is on public land, an interagency dispatch center is contacted. The initial attack will involve first assessment and possibly an aggressive attack involving a small number of locally available resources, per interagency agreements. **Figure 10-6** shows an example of an initial attack organization. At this point, local air resources may include nearby and available helicopters or single engine reconnaissance planes, especially if the fire is inaccessible by ground.

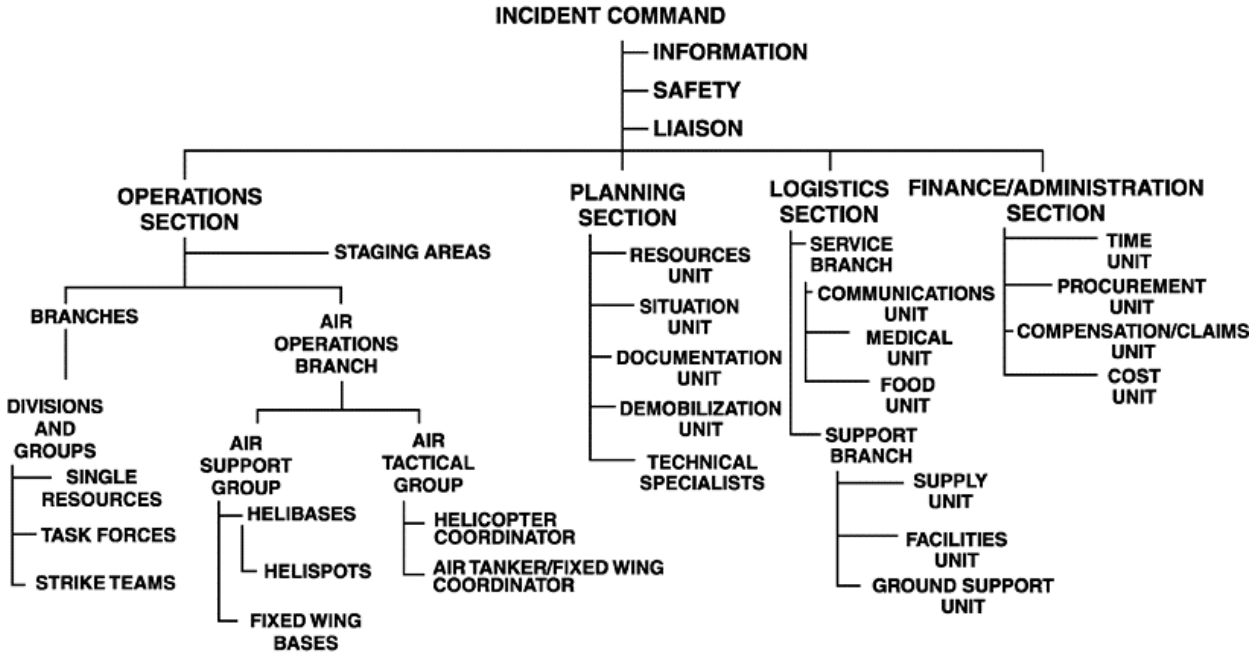
Figure 10-6: Initial Attack Organization



Source: National Wildfire Coordinating Group, Wildland Fire Incident Management Guide

If the fire is not contained during the initial attack, the incident commander will elevate the fire to an extended attack incident and increase the size and complexity of the firefighting effort. This escalation will continue especially if a Wyoming community or housing development is threatened. **Figure 10-7** shows just how the incident command structure organization increases in complexity. The air operations branch has its own command structure. Likely a local airport serves as a base of operations for helicopters, fixed wing aircraft, fueling, fire retardant, and possibly ground crew support. This means that under certain situations/conditions, most airports in Wyoming could support aerial firefighting activities. The logistics of ordering the resources for the largest fires moves from the local dispatch center to the Rocky Mountain Interagency Coordination Center in Lakewood, Colorado. If there are multiple fires in the region and high demand for firefighting resources, incident command will be transferred to the National Interagency Coordination Center in Boise, Idaho. The escalation of incident command is done carefully, as various cost-sharing agreements come into play when there is a high severity fire and national response.

Figure 10-7: Organizational Incident Command for Complex Fire Responses



Source: National Wildfire Coordinating Group, Wildland Fire Incident Management Guide

When moderate and high severity fires occur, and especially if there are multiple fires, aviation resources and airports become central to fire suppression efforts. In September 2018, Wyoming was hit with three wildfires at once:

- Roosevelt Fire – 30 air miles south of Jackson
- Marten Creek Fire – 50 miles south of Jackson
- Ryan Fire in Carbon County and Jackson County, Colorado near Steamboat Springs

The Roosevelt and Ryan fires began on September 15, 2018, and the Marten Creek fire started the next day. All three fires were human caused in rugged terrain characterized by steep valleys and tightly timbered slopes. The fires began during a "Red Flag Warning" forecast which included low relative humidity, warm temperatures, and strong winds. The Roosevelt Fire was near the Hoback Ranches subdivision and ultimately consumed 55 homes. Approximately 89,000 acres burned, with the Roosevelt Fire consuming 69 percent of the acres burned.

With three concurrent fires, erratic fire behavior, and a large swath of terrain inaccessible to ground crews, aviation resources were in high demand. Prior to an initial attack, a Teton Helitack and a flight from Idaho flew reconnaissance of the fires. A U.S. Forest Service helicopter performed evacuations for individuals in the Roosevelt and Marten Creek fire areas. After discovery of the Ryan Fire, helicopters and fire crews were able to implement an initial suppression effort until high winds forced ground crews and aerial resources to disengage and efforts turned to evacuating hunters and campers in the path of the fire. By the second day of the fires, the Roosevelt Fire had been elevated to a Type 2 Incident Command and the Marten Fire a Type 3 Incident Command. The Ryan Fire began with a Type 4 initial attack, then in two days this was replaced with a

Type 3 Incident Management Team; the next day responsibility was transferred again to the Rocky Mountain Interagency Coordination Center as a Type 2 fire.[9]

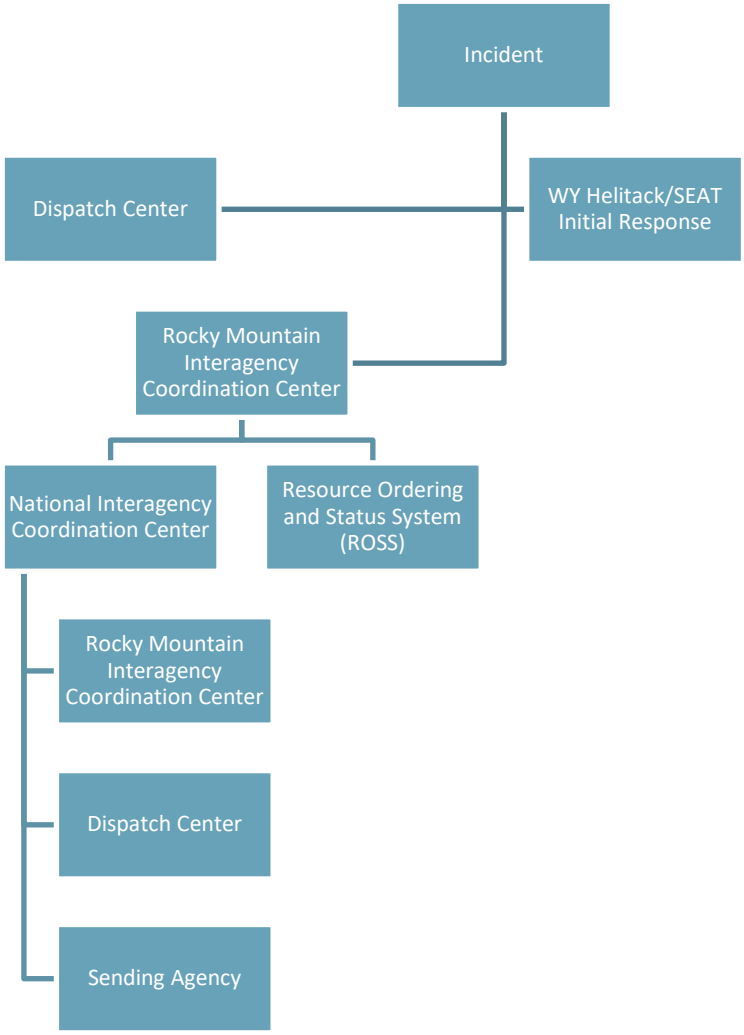
As the WYDOT study was wrapping up, areas of Wyoming in the Medicine Bow National Forest about 40 miles west of Laramie were hit by a major fire. As of mid-October, the fire had burned over 176,000 acres, destroying 65 structures. Over 1,440 evacuations had taken place; and an estimated 1,080 firefighters were engaged in fighting the fire. An essential part of fighting the fire has been aerial aircraft. Over 10 different aircraft have been engaged in fighting the Mullen Fire. These include the multiple large tankers, SEAT aircraft, 415 and small scooper aircraft, and multiple helicopters. As of mid-October, the fire was about 40% contained. High winds and dry conditions have been a major issue in containing and fighting this fire.

Once fires are elevated to Type 3, requests for firefighting resources, including out-of-state aircraft are centralized through the Resource Ordering and Status System (ROSS) database[10]. **Figure 10-8** shows how the mobilization of aircraft and other out-of- state resources are requested and then dispatched. Sometimes use of local firefighting resources in Wyoming are dispatched directly and do not get into the ROSS request and fulfillment process.

[9] The Incident Command System (ICS) is flexible, scaling up or down as complexity and needs change. Type 5 is the least complex fire, while Type 1 is the most complex. https://www.nps.gov/articles/wildland-fire-incident-command-system-levels.htm.

[10] The U.S. Forest Service, representing the interests of all National Wildfire Coordinating Group (NWCG) member organizations, manages the ROSS database.

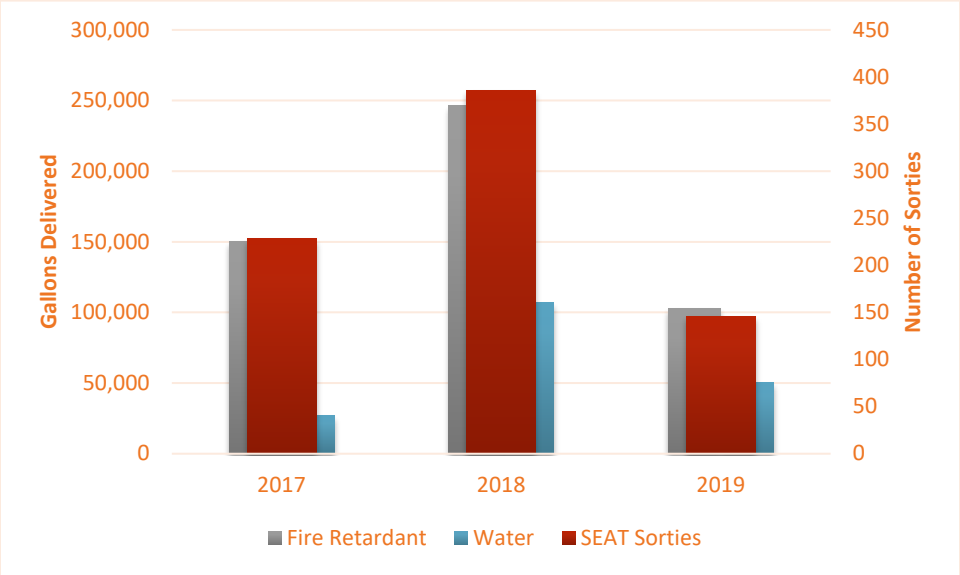
Figure 10-8: Mobilization of Firefighting Aircraft and Resource Process



Source: Prepared by KRAMER aerotek from 2020 National Interagency Mobilization Guide, NICC

To gauge the level of local firefighting efforts for the Roosevelt, Marten, and Ryan fires, **Figure 10-9** compares BLM SEAT base activity in Wyoming between 2017-2019. For 2018, the number of SEAT sorties and gallons of fire retardant and water delivered was much higher that year, in part because of BLM SEAT participation in suppressing the three fires.

Figure 10-9: BLM SEAT Base Activity in Wyoming, 2017-2019



	2017	2018	2019
Number of SEAT Sorties	228	386	146
Fire Retardant Delivered (gallons)	150,347	246,155	102,666
Water Delivered (gallons)	27,066	106,901	50,546

Source: Wyoming BLM

Because the three fires grew, they required a more complex response, and the National Wildlife Coordinating Group (NWCG) in Boise took over coordination and deployment of aerial firefighting aircraft coming from outside Wyoming. Each flight request was filled and tracked through the ROSS database.

According to ROSS records, after the initial attack, 168 aerial firefighting flights were dispatched between September 15th to October 1st to fight the three fires. Eighty different out-of-state aircraft were involved. Ten aircraft provided aerial firefighting services to two fires. **Table 10-7** shows the types and number of aircraft that were deployed to fight the fires and the number of flight requests filled for each fire. Except for two aircraft provided by the states of Alaska and Colorado, all the aerial firefighting aircraft were privately-owned aircraft leased or contracted to firefighting agencies. Companies that owned the aircraft had registered these aircraft in 20 different states as noted in **Table 10-7**.

The Martin Fire, September 16, 2018. InciWeb

Table 10-7: Aircraft Flight Requests Filled by the NWCG for the Roosevelt, Marten Creek, and Ryan Fires

		Aircraft Flight Requests Filled			
Aerial Firefighting Equipment	**Number of Firefighting Aircraft Assigned**	**Roosevelt**	**Marten**	**Ryan**	**State of FAA Aircraft Registration**
Airtanker, Type 1	11	38	3	2	MT, OR, UT, WA
Airtanker, Type 3 (Multi-Engine)	4	12	6	-	DE, WA
Airtanker, Type 3 (Single Engine)	13	4	-	21	CA, CO, GA MN, MT, NE, NM, TX
Airtanker, VLAT	3	13	1	-	NM
Fixed Wing, Aerial Supervision	1	-	-	1	MS
Fixed Wing, Air Tactical	14	5	5	13	AZ, DE, ID, MT, NM
Fixed Wing, Lead Plane	6	10	1	1	AK, ID, MS
Fixed Wing, Reconnaissance	1	-	-	1	CO
Helicopter, Type 1 Limited	13	6	2	6	CA, FL, MI, MT, OR, UT
Helicopter, Type 2 Standard	5	2	2	1	AK, MT, NM, OR
Helicopter, Type 3 Standard	9	5	3	4	AK, CO, DE, GA, ID, OR, WY
Total	**80**	**95**	**23**	**50**	
Acreage Burned		**61,511**	**6,500**	**21,120**	

Sources: Prepared by KRAMER aerotek with assistance from the USDA Forest Service Rocky Mountain Research Center, ROSS Database, FAA Aircraft Registry, and InciWeb

With the Covid-19 pandemic, firefighting protocols have changed somewhat. Air and ground crews are intentionally kept in the same small groups throughout the season. The closest firefighting forces are sent out first to implement an aggressive initial attack on a fire and to avoid elevation of a fire's status to a higher incident command. The U.S. Forest Service added 40 helicopters to their seasonal capacity to improve nearby geographic response and avoid the complexity of large firefighting responses. This approach has also led to greater use of aviation resources to suppress early wildfire outbreaks.

2020 has been an active year for large wildland fires throughout the west. Wyoming airports serve as vital support centers providing landing areas, fuel, fire retardant and water, and crew support for fires in the region. While the Rawlins Municipal Airport SEAT base is closed for runway repairs, SEAT bases in Casper, Riverton, and Greybull remain active and Wyoming's firefighting capacity will increase in 2021. According to Airport Director Devon Brubaker at RKS, the new aerial firefighting facility under construction at Rock Springs will be completed in 2020 and will offer additional firefighting capabilities to Southwest Wyoming, Northwest Colorado, and Northeast Utah in 2021.

Firefighting remains an interagency, cooperative venture of immense importance. With so much public land in Wyoming, aerial firefighting is central to early response and suppression of wildland fires which can threaten Wyoming's businesses and residents and their property.

On the first red flag day of the fire season, two lightning strikes during a dry thunderstorm ignited a fire on Richard Mountain in the Clay Basin area in Sweetwater County.

Initially, the fire was around 100 to 150 acres. However, as the wind shifted, the fire rapidly exploded to 2,000 acres. Aircraft laid out retardant to help protect the areas.

The Richard Mountain Fire is on rough inaccessible terrain, causing difficulties for firefighters to respond. Sweetwater County Fire Warden, Mike Bournzian said they had to insert people via helicopter to fight the fire. Since the fire was on Bureau of Land Management and state land, BLM took over command of the fire and put together a Type 3 organization. Resources from the Sweetwater County Fire Department, Rock Springs BLM, Vernal BLM, along with multiple aircraft have responded to the fire.

Olivia Kennah, SweetwaterNOW
August 4, 2020

The Richard Mountain Fire, Sweetwater County, August 3, 2020. Photo by Kayden Henline

10.3 Case Study on Hospitals/EMS Operators in Wyoming

First responders with the Story Volunteer Fire Department in Sheridan County train alongside Wyoming Life Flight
Wyoming Tribune Eagle, Carrie Haderlie photo

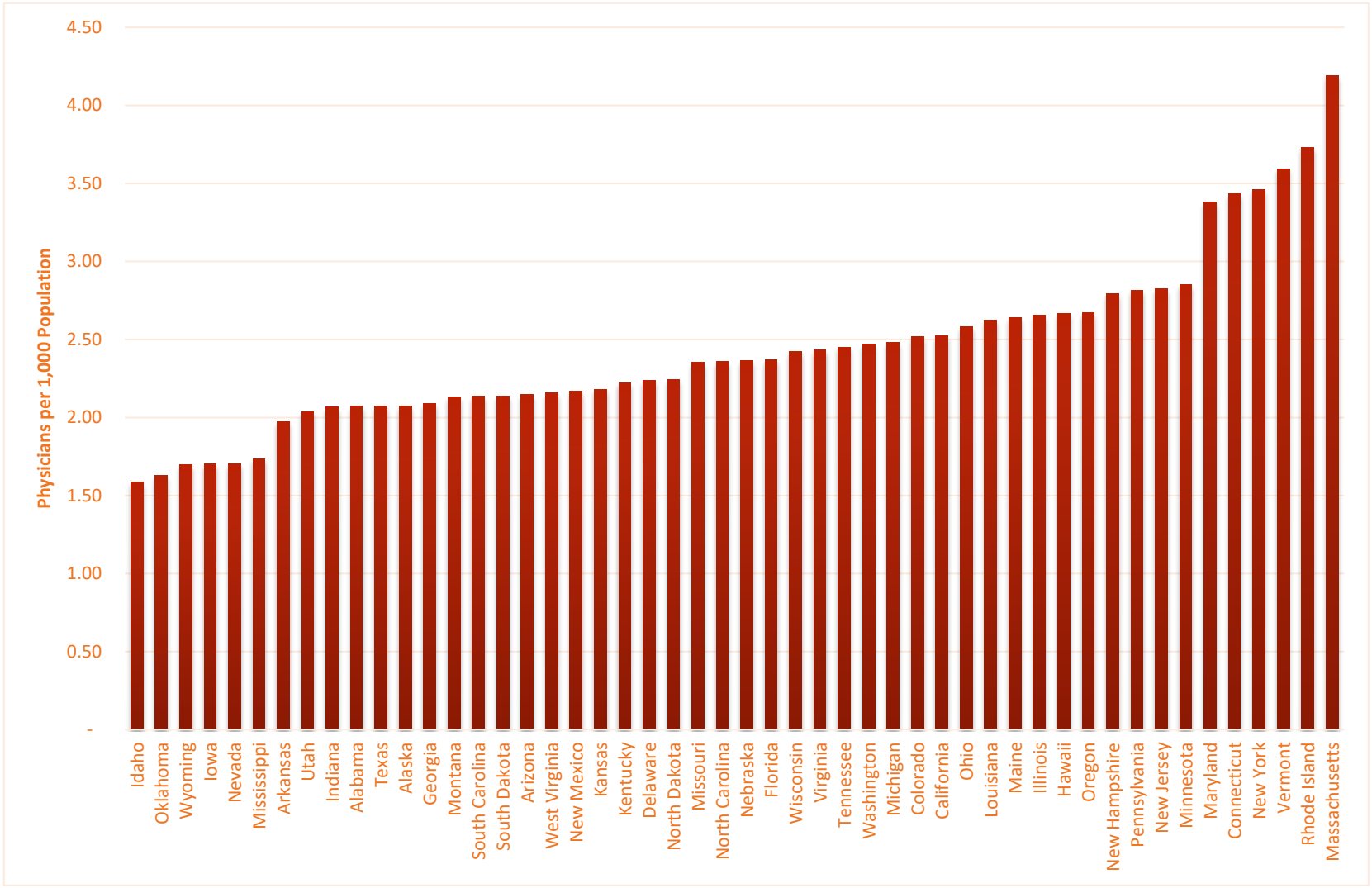
In Wyoming, where population is spread across many rural communities and cities, airports and helipads serve as essential components of the healthcare system. Aviation is used to transport patients with time-sensitive conditions such as a heart attack, stroke, trauma/injury, and/or complications during childbirth. Air medical services are also used for emergency airlift of accident victims, for doctor transport to rural hospitals and clinics, and for tissue and organ transfers. Some laboratory tests and needed medical supplies and equipment are transported in aircraft by logistics companies and integrated air cargo carriers such as FedEx or UPS. In addition, the Wyoming Army National Guard uses its helicopters for search and rescue, as well as emergency airlift. This case study highlights how aviation supports the healthcare industry in Wyoming and how, in many ways, aviation is central not only to emergency medicine but also to more routine healthcare in the state.

10.3.1 Airport Support for Rural Medicine

Just how rural is Wyoming? Seventeen of Wyoming's 23 counties have fewer than six people per square mile, and the overall state average is 5.17 people per square mile.[11] With the exception of Casper and Cheyenne, most of the population lives in rural areas (47 percent of residents). Access to healthcare is one of the top issues for Wyoming's rural residents. In terms of medical viability, the availability of physicians is a major limiting factor.[12] **Figure 10-10** shows the physicians per 1,000 population by state. Wyoming is ranked the third lowest with 1.7 physician per 1,000 population.

[11] Wyoming Department of Health, Office of Rural Health
[12] Wyoming Department of Health, "Section 338 – Review of Sustained Hospital Viability," October 1, 2019.

Figure 10-10: Physicians per 1,000 Population, 2017



Source: Area Health Resources File. HRSA 2020

The number of physicians per capita also varies across the state with Teton County supporting the highest/c rate of over four physicians per 1,000 people (similar to Massachusetts);[13] 10 counties in Wyoming have less than one physician per 1,000.

10.3.2 Hospital and EMS Use of Study Airports

There are 33 hospitals in Wyoming[14] and 27 of these hospitals accept all patients and offer different levels of acute care. To address the needs of a widely dispersed population and because accidents are the fourth leading cause of death in Wyoming (following heart disease, cancer, and lower respiratory disease), Wyoming hospital facilities are divided into four categories of medical capacity/capability. Some communities, particularly the largest such as Cheyenne or Casper, have multiple facilities with different levels of care.

- **Level II, Regional Trauma Center (RTC)** provides definitive care for all injured patients including 24-hour coverage by general surgeons, as well as some specialty care coverage. Casper and Cheyenne are Wyoming's RTCs and serve as a referral center if a patient needs additional specialty care that may be only available at Level I Trauma Centers. The closest **Level I** facilities for Wyoming residents are in Lakewood, Colorado or Salt Lake City, Utah.
- **Level III, Area Trauma Hospital (ATH)** has the capability to assess, resuscitate, and stabilize injured patients and to provide care for most trauma patients. There are Level III centers in Cheyenne, Casper, Gillette, Jackson, Sheridan, and Rock Springs.
- **Level IV, Community Trauma Center (CTH)** is a lower level of care that may not have a 24-hour emergency department and may have only one surgeon on staff. Cody, Douglas, Lander, Laramie, Powell, Rawlins, Thermopolis, and Worland have Level IV facilities. Nine counties have no Level IV facility.
- **Trauma Receiving Facility (TRF)** can be a hospital with no surgeon or a rural clinic. These facilities can only resuscitate and stabilize before transporting a patient to a higher-level facility.[15]

Given widely different medical capacities, patients are frequently transported to Level I, II, and III hospitals within the state or to hospitals in neighboring states. Ground ambulance services are offered by a variety of groups including an all-volunteer service, hospital-owned and operated ambulances, fire departments or other city/county entities, or private commercial companies.[16] Use of these ground transfer services often depends on their availability and service area.

Patient transfers to larger, more resourced facilities and rescues of accident victims in remote locations often involve helicopters or fixed wing aircraft. In these instances, airports or helipads are used. In surveys completed for this case study, the top three uses for air medical transport in Wyoming were emergency airlift, inter-facility transfers, and neonatal transport. Focusing on just airlift from accidents and patient transfers, hospitals and clinics reported receiving trauma patients by airlift from an accident site 11 percent of the time and using medical airlift to transfer a patient to another facility 89 percent of the time (out of 836 reported trips). Most of these patient transfers (79 percent) were to facilities outside the state. EMS providers presented a slightly different view, reporting that 21 percent of their medical airlifts (out of 746 trips reported) involved transporting patients from accidents to hospitals and 79 percent involved patient transfers to different facilities, 62 percent of which were out-of-state.

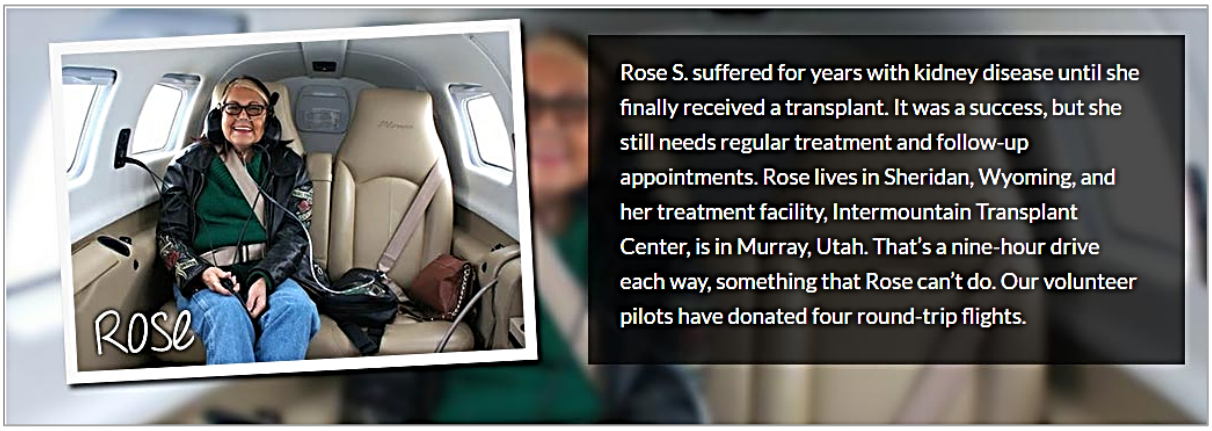
[13] Wyoming Department of Health, "Section 338 – Review of Sustained Hospital Viability," October 1, 2019.
[14] Of the six hospitals in Wyoming not included in this discussion, two are VA hospitals, two specialize in psychiatric care, one is a rehabilitative hospital, and the last is a physician-owned facility.
[15] Ibid. page 38.
[16] Ibid, page 24.

In addition to patient airlifts, medical transport is routinely used to carry diagnostic and lab tests; medical equipment; medical supplies, devices, and implants; blood and plasma; pharmaceuticals; and documents.

10.3.3 Use of Private Aircraft to Support Medical Services

Private aircraft are also used for medical airlift. For example, Angel Flight West (AFW), a nonprofit volunteer organization operating within the 13 Western states, matches up volunteer pilots and their aircraft to patients in need. AFW helps children and adults to receive medical treatment or other vital care that is not available locally. Rose's story below is typical of the type of missions AFW flies to help patients in Wyoming and other western states.

> Because of our remote location and desire to decrease costs, we choose to bring in by air supplies, implants, and devices as scheduled versus storing onsite. We also have a Trauma designation where we need supplies urgently and utilize other facilities to run tests or to read pathology specimens that are specialized.
>
> Colleen Heeter
> Campbell County Memorial Hospital



Source: Rose's Story, Angel Flight West

10.3.4 Medical Airlift in Wyoming

airlift services are an intrinsic part of Wyoming's healthcare system. Public and private hospitals in the state rely on agreements with third-party air ambulance companies to provide emergency airlift and medical transport. How this is done varies from hospital to hospital and is governed by agreements between the hospitals, air ambulance companies, and insurance providers (private, Medicare, and Medicaid). There are three operating models used in Wyoming. With the first model and most frequently used in Wyoming, hospitals offer air ambulance services as part of their healthcare program. The hospitals supply medical personnel and communications; the EMS company provides the aircraft, the airlift, and maintenance for the aircraft. Cheyenne Regional Medical Center is an example of this type of staffing/operating model. Air Methods Corporation operates a base at the Cheyenne Regional Airport under the name AirLife Denver17. The second model is a standalone operation that is community-based. Casper's Wyoming LifeFlight's operation is an example of a community-based model. This air ambulance service is also owned and operated by Air Methods, but in this instance, the company provides both the aircraft and clinical crews, as well as medical oversight, aircraft operations, billing, and dispatch. In Casper, Wyoming LifeFlight maintains both helicopter and fixed-wing aircraft at the airport (CPR) with 24 line-crew, three mechanics, and two medical directors that oversee

[17] AirLife Denver AIRLIFE is the Emergency Medical /Critical Care Transport Service of HealthONE providing air and ground critical care transport for both adult and pediatric medical/ trauma patients. AirLife maintains crew and operational bases in Wyoming and Colorado.

the clinical scope of the practice of Wyoming LifeFlight.[18] In the third model, a hospital outsources the aviation and billing operations but still maintains the hospital's brand, medical protocols, and clinical teams. Billings Clinic MedFlight based in Montana, but licensed to operate in Wyoming, outsources its aviation to MedFlight Air Ambulance and flies under the brand of the Billings Clinic in Wyoming.

Other air medical companies also serve Wyoming and base helicopters and fixed-wing aircraft at different airports in the state. **Table 10-8** shows companies that base aircraft in the state (2019).

Table 10-8: EMS Companies with Aircraft Based at Wyoming Airports

Name	Home State	WY Airports/Helipads with Aircraft	Based Aircraft	
			Rotor	Fixed
Wyoming Life Flight	CO	Casper/Natrona County International	1	1
Classic Air Medical	UT	Riverton Central Wyoming Regional	1	1
Classic Air Medical	UT	Rawlins Municipal	1	
Classic Air Medical	UT	Lander Hunt Field	1	
Reach Air Medical	CA	Cody Yellowstone Regional	1	
Air Life Denver	CO	Cheyenne Regional	1	
Medical Air Rescue Co.	SD	Sheridan Hospital	1	
Medical Air Rescue Co.	SD	Laramie Regional		1
University of Utah Air Med	UT	Memorial Hospital Sweetwater	1	
University of Utah Air Med	UT	Rock Springs Southwest Wyoming Regional		1
Guardian Flight – Wyoming	UT	Gillette Northeast Wyoming Regional		1
Guardian Flight – Wyoming	UT	Lander Hunt Field		1
Guardian Flight – Wyoming	UT	Worland Municipal		1
Guardian Flight – Wyoming	UT	Riverton Central Wyoming Regional	4	
Guardian Flight – Wyoming	UT	Cody Helipad Base	3	

Source: Prepared by KRAMER aerotek from ADAMS 2019 Atlas & Database of Air Medical Services, 17th Edition

The Wyoming Army Guard in Cheyenne also remains on MEDEVAC standby with its fleet of Sikorsky UH-60 Black Hawk helicopters. These aircraft engage in search and rescue missions, aerial firefighting, and medical airlift if no civilian aircraft are available. Other air ambulance companies like AirMed International and Billings Clinic MedFlight operate in the state but do not maintain bases or aircraft in Wyoming.

[18] Air Methods Public Comments: WY 1115 Air Ambulance Waiver Application, 2019.

In addition to EMS bases in the state, many hospital helipads and study airports support emergency medical airlift, patient transfers, doctor transport, and medical air cargo for supplies, equipment, organ and tissue transfer, and laboratory tests. **Table 10-9** lists study airports used for air medical transport that were identified in the hospital/clinic surveys. In the table, airports 'visited' indicate a facility that was used by a doctor, a hospital, or an EMS provider. Airports where EMS providers base an aircraft are listed as 'based aircraft'. For some of the airports, an EMS company bases an aircraft and other EMS companies may also visit the same airport for medical airlift, patient pickups, or deliveries. **Table 10-9** shows the extent to which the hospitals and EMS providers relied on Wyoming airports during 2019. **Table 10-10** identifies private helipads used by hospitals and EMS providers during the same year.

> Our company provides rapid scene response to remote areas and airlift of patients to definitive care. We have transported hundreds of patients in Wyoming including vehicle accidents with multiple trauma victims to kids, moms with high risk obstetric emergencies, newborns just delivered with congenital emergencies or other medical emergencies, strokes and heart attacks, burns from home or work sites, soldiers with medical emergencies while training, kids with medical emergencies and trauma, and the list goes on and on.
>
> Casey Zeigler
> AirLife Denver

Table 10-9: Wyoming Airports Used for Medical Air Transport

				Airport Use		
FAA ID	Role	County	Airports	Doctors	Hospitals	EMS
CPR	Commercial	Natrona	Casper - Natrona County International	Visited		Based Aircraft/Visited
CYS	Commercial	Laramie	Cheyenne Regional - Jerry Olson Field		Visited	Based Aircraft/Visited
COD	Commercial	Park	Cody - Yellowstone Regional		Visited	Based Aircraft/Visited
GCC	Commercial	Campbell	Gillette - Northeast Wyoming Regional	Visited	Visited	Based Aircraft/Visited
JAC	Commercial	Teton	Jackson Hole		Visited	Based Aircraft/Visited
LAR	Commercial	Albany	Laramie Regional	Base	Visited	Visited
RIW	Commercial	Fremont	Central Wyoming Regional Airports	Visited	Visited	Based Aircraft/Visited
RKS	Commercial	Sweetwater	Rock Springs - Southwest Wyoming Regional	Visited	Visited	Based Aircraft/Visited
SHR	Commercial	Sheridan	Sheridan County			Visited
AFO	Business	Lincoln	Afton - Lincoln County			
BYG	Business	Johnson	Buffalo - Johnson County		Visited	Visited
DGW	Business	Converse	Douglas - Converse County			Visited
EVW	Business	Uinta	Evanston-Uinta County - Burns Field			
GEY	Business	Big Horn	Greybull - South Big Horn County			Visited
LND	Business	Fremont	Lander - Hunt Field			Based Aircraft/Visited
PNA	Business	Sublette	Pinedale - Ralph Wenz Field			
RWL	Business	Carbon	Rawlins Municipal - Harvey Field	Visited	Visited	Based Aircraft/Visited
SAA	Business	Carbon	Saratoga - Shively Field			
TOR	Business	Goshen	Torrington Municipal	Visited	Visited	Visited
WRL	Business	Washakie	Worland Municipal		Visited	Based Aircraft/Visited
BPI	Intermediate	Sublette	Big Piney - Miley Memorial Field			
DUB	Intermediate	Fremont	Dubois Municipal		Visited	

				Airport Use		
FAA ID	Role	County	Airports	Doctors	Hospitals	EMS
FBR	Intermediate	Uinta	Fort Bridger			
GUR	Intermediate	Platte	Guernsey - Camp Guernsey Army Airfield			Visited
EMM	Intermediate	Lincoln	Kemmerer Municipal		Visited	
ECS	Intermediate	Weston	Newcastle - Mondell Field		Visited	Visited
82V	Intermediate	Laramie	Pine Bluffs Municipal			Visited
POY	Intermediate	Park	Powell Municipal		Visited	Visited
HSG	Intermediate	Hot Springs	Thermopolis - Hot Springs County			Visited
EAN	Intermediate	Platte	Wheatland - Phifer Field	Visited		Visited
U68	Local	Big Horn	Cowley - North Big Horn County		Visited	Visited
DWX	Local	Carbon	Dixon			
W43	Local	Crook	Hulett Municipal			
LSK	Local	Niobrara	Lusk Municipal			Visited

Sources: Prepared by KRAMER aerotek from Hospital/Clinic and EMS Survey, 2020

Table 10-10: Private Helipads in Wyoming Used for Medical Air Transport

FAA ID	Role	County	Private Helipads	Hospitals and EMS Provider 2019 Use
CPR	Commercial	Natrona	Wyoming Medical Center	Visited
CYS	Commercial	Laramie	Cheyenne Echo	Visited
COD	Commercial	Park	West Park Hospital	Visited
GCC	Commercial	Campbell	Campbell County Memorial Hospital	Visited
JAC	Commercial	Teton	St. John's Medical Center Teton County Search & Rescue	Visited
LAR	Commercial	Albany	Ivinson Memorial Hospital	Visited
RIW	Commercial	Fremont	Riverton Memorial Hospital	Visited
RKS	Commercial	Sweetwater	Memorial Hospital of Sweetwater County	
SHR	Commercial	Sheridan	Sheridan Memorial Hospital	Visited
AFO	Business	Lincoln		
BYG	Business	Johnson		
DGW	Business	Converse		
EVW	Business	Uinta		
GEY	Business	Big Horn		
LND	Business	Fremont		
PNA	Business	Sublette	Pinedale Medical Clinic	Visited
RWL	Business	Carbon	Carbon County Memorial	Visited
SAA	Business	Carbon		
TOR	Business	Goshen	Community Hospital	Visited
WRL	Business	Washakie	Washakie Memorial Hospital	Visited
BPI	Intermediate	Sublette	Marbleton Big Piney Clinic	
DUB	Intermediate	Fremont		
FBR	Intermediate	Uinta	Evanston Regional Hospital	
GUR	Intermediate	Platte		
EMM	Intermediate	Lincoln	South Lincoln Medical Center	Visited
ECS	Intermediate	Weston		
82V	Intermediate	Laramie		
POY	Intermediate	Park	Powell Hospital	Visited
HSG	Intermediate	Hot Springs		
EAN	Intermediate	Platte		
U68	Local	Big Horn		
DWX	Local	Carbon	Memorial Hospital, Rawlins	
W43	Local	Crook		
LSK	Local	Niobrara		

Sources: Prepared by KRAMER aerotek from Hospital/Clinic and EMS Survey, 2020

Even with good air access to healthcare in Wyoming, the cost of medical airlift remains high. The complexity of contracts, networks of healthcare providers, and insurance companies has made the cost of air ambulance service in Wyoming highly variable and controversial. As a low-density state, Wyoming relies on medical airlift to facilities that can provide the appropriate level of care. However, while Medicare and Medicaid patients have negotiated rates for medical airlift, patients who are privately insured are subject to in-network and out-of-network rates for these same services. Given that the decision to transport a patient by air ambulance is often made by first responders or physicians, the privately insured trauma victim does not always get to express a preference on medical transport.

The General Accounting Office (GAO) found that in 2017, 69 percent of privately-insured patients were transported by out-of-network air ambulances, often resulting in surprise billings in excess of $30,000.[19] The Wyoming Department of Health began to address this issue with a proposal to reform how air ambulance services are delivered and how providers are compensated.[20] Implementation of a comprehensive all-payer air ambulance system through the Wyoming Medicaid Program failed to get federal approval in 2020; and consequently, the issue of the high cost of air medical transport for critically-ill and privately-insured patients persists.

In the meantime, delivery of healthcare in Wyoming remains innovative. Aviation makes it possible to move specialists, medical devices, and blood products throughout the state. Here is a sampling of how hospitals use medical airlift, as described in the hospital/clinic survey in 2020.

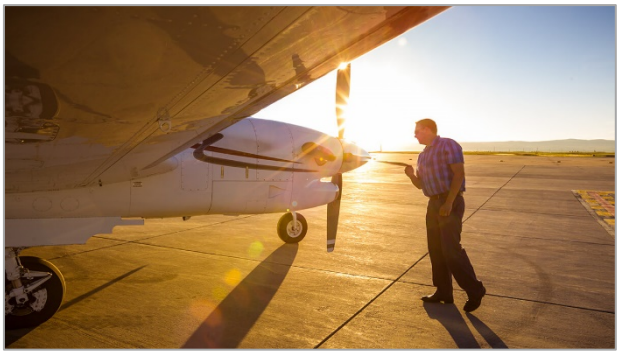
- "Bringing specialists to rural community hospitals is essential to both keeping Wyoming economic dollars in Wyoming as well as keeping patients near homes and their support systems as they receive care for essential medical services."
- "We are not able to recruit easily to northeast Wyoming, and we frequently need locum tenens[21] physicians to support our onsite providers. We are also in need frequently of clinical staff (nurses, medical assistants, speech therapist) to support our hospital census."
- We use aviation frequently … "for emergency needs and many times for high risk OB."
- "Torrington has cardiologists that fly in from Banner, Colorado to provide services in our community."
- "With our rural location, it would be extremely difficult to get patients to specialty care providers, surgery centers, pediatric care, and burn centers without our local airport. Time is of the essence when we are transferring most of these patients. With a prolonged ground transfer to another airport and without the availability of special equipment and trained staff, some of these patients might not have survived to get the help that they needed soon enough."

Angel Flight West is but one example of how private aviation supports Wyoming's health care system. Hospitals reported that they send anesthesiologists, emergency physicians, surgeons, urologists, and cardiologists to rural medical centers and clinics to join the local staff for a single day or extended temporary assignment.

[19] GAO analysis of data from FAIR Health, "Air Ambulance," GAO-19-292, March 2019.
[20] Wyoming Department of Health, "Wyoming Medicaid Coordinated Air Ambulance Network, 1115 Waiver Application", October 2019.
[21] Locum tenens work consists of a physician, nurses, medical assistants, and therapists working temporarily in another practice, not his or her own. The practice demands may include clinic or hospital care or a combination of both.

10.3.5 Physician Use of Wyoming Airports

Premier Bone & Joint Centers, based in Laramie, runs nine orthopedic clinics across Wyoming, serving about 80 percent of the state's population. With seven orthopedic and musculoskeletal specialists, four pilots, four King Air C90As, and 10 vans and cars positioned across the state, the doctors make the rounds to local clinics. Nurses and support staff frequently travel with the doctors. This operating model makes it possible to serve many rural communities in Wyoming and to keep patients close to home for surgery, recovery, and follow-up.



Chief Pilot Cody Diekroeger conducts a quick post-flight check of Premier Bone and Joint Centers' King Air C90A, NBAA Business Aviation Insider, January 3, 2016

"It's a clear summer morning in Casper, Wyoming's second largest city, as the King Air C90A pulls up to Atlantic Aviation's ramp and Chief Pilot Cody Diekroeger cuts the engines. Dr. Lawrence Jenkins is the first down the airstair, followed by Dr. Michael Kaplan and two nurses. All of them pile into a van that has the same logo as the airplane: Premier Bone & Joint Centers.

After a quick post-flight check of the airplane, Diekroeger jumps out of the cockpit and into the van's driver's seat. It is a 20-minute drive to Premier's clinic in Casper, where the doctors and nurses are greeted by an office assistant and two radiology technicians. Before 8 a.m., the clinic is open, and Dr. Jenkins and Dr. Kaplan are already seeing their first patients.

"I don't see how we could operate all our clinics without airplanes," said Jenkins, a spinal surgeon. "If we did not fly, we would probably only have two or three doctors, and we couldn't bring sub-specialist care to these small towns. During winter in Wyoming, there are lots of days when the roads are so bad, we could not get there.""

NBAA, Business Aviation Insider
January 3, 2016

While Wyoming is a small state in terms of population, the healthcare industry is a large economic contributor to the local, regional, and statewide economies. The airport system is a critical component to the smooth functioning of services needed to support search and rescue, patient transfers, tissue and organ transport, physician access to small hospitals and clinics, and medical related express packages and air freight. Local airports are frequently used by hospitals and clinics when there is no helipad on the premises, when patient transport requires a fixed-wing aircraft, or when inclement weather makes landing at the local airport a safer option than driving. Airports throughout the state are key facilities that make it possible for the healthcare system to extend its reach in capabilities and serve the entire state.

10.4 Agency Use of Study Airports

As part of WYDOT's Statewide Aviation Economic Impact Study, outreach to a variety of agencies was undertaken. The objective of the outreach was to help better understand and document how various agencies rely on and benefit from the study airports. Included in this effort was an online survey that collected information on which agencies rely on the airports, which airports the agencies use, and why the agencies use aviation to support their activities and responsibilities. State agencies were contacted, as were regional and local agencies. Regional/local agency contact focused primarily on economic development groups and chambers of commerce.

10.4.1 Agency Outreach

It is important to note that agency outreach took place primarily between April and June 2020. This was at a time when many were "working from home." This may have dampened survey participation rates, despite normal follow up to secure a survey response. A total of 105 different agencies were contacted and 38 replies were received for a total response rate of 38 percent**. Table 10-11** presents information on respondents that indicate aviation/study airports are very important to supporting their operations. This table contains a few individual business respondents who replied to the survey on behalf of a request from their local chamber of commerce.

Some, but not all, of the survey respondents listed in **Table 10-11** provided more specific responses to the survey. Agency responses are summarized in **Table 10-12.** As **Table 10-12** shows, responding agencies report a wide variety of reasons for why they rely on and benefit from the study airports. Reponses indicate there are, however, four overarching reasons the agencies report they benefit from the study airports. Primary benefits, as reported by various agencies in Wyoming, are summarized below:

Table 10-11: Agencies and Others Relying on Study Airports

Name of Organization or Organization
Advance Casper
Casper Area Chamber of Commerce
City of Lander
City of Powell
Cody Chamber of Commerce
College of Arts & Sciences, U. Wyoming
Edward Jones
Energy Capital Economic Development
Fremont County School District #1
HDR Engineering
Meyers Gambles Inc
Platte County Economic Development
Porters MVS
Riverton Museum
State of Wyoming, Department of Environmental Quality
State Parks and Cultural Resources
The Enterprise
The Nature Conservancy Wyoming
Tyvo Drilling, LLC
Upton Economic Development Board
Washakie Development Association
Wind River Fitness Center, Inc.
WYDOT

Name of Organization or Organization
WYDOT - Engineering and Planning division
WYDOT - Environmental Services
Wyo. Public Service Commission
Wyoming Board of Parole
Wyoming Business Council
Wyoming Community College Commission
Wyoming Department of Agriculture
Wyoming Department of Transportation
Wyoming Division of Criminal Investigation
Wyoming Game and Fish Department
Wyoming Highway Patrol
Wyoming Highway Patrol

Table 10-12: Summary of Agency Responses on Aviation/Airport Use

Agency/Organization	Narrative
Advance Casper	Advance Casper is an economic development organization whose purpose is to promote the expansion of existing businesses, develop high-value startup companies, and recruit new companies to the Casper area that complement the existing business base. Advance Casper conducts events that promote the Casper community. Advance Casper indicates that commercial air service is key to business attraction and retention. Advance Casper is a major contributor to Aircraft Owner and Pilot Association (AOPA) events that promote aviation. The organization has also held an Aerospace and Defense event that attracted professionals from all over the country. The event was organized to demonstrate to Wyoming businesses how they can help to diversify the economy. More than two hundred people attended the event, including the Wyoming's congressional delegation and the Governor.
City of Lander	The City of Lander is home to Hunt Field. This general aviation airport supports a variety of general aviation services and activities. The airport has two air medical companies onsite and four to six medical providers that fly in for monthly services in Lander, as well as one medical provider that uses the airport multiples times each week, providing medical airlift services in Casper. These medical service help to improve the area's quality of life, retaining current residents and attracting future residents. Medical services supported by the airport reduce the costs and inconvenience of traveling to other cities for healthcare services. The airport also has aircraft owned by a car salesman and a construction company; both use the airport to support their statewide operations. City mechanics and the Water and Sewer Treatment plants rely on overnight supplies and maintenance parts, and the Water Treatment plant ships water samples by air to state labs for testing. There are also a variety of individuals who live in Lander due to its economic activity and regional lifestyle, but who work remotely. Hunt Field provides these individuals with access to air travel when they have a need to travel to offices in other cities. The Wyoming Catholic College and the National Outdoor Leadership School (NOLS) rely on commercial air service in nearby Riverton to bring in students and families for visits and special occasions. Given the remote location of many cities in Wyoming, including Lander, access to aviation is key for local economic vitality.
College of Arts & Sciences, U. Wyoming	The College of Arts & Sciences at the University of Wyoming in Laramie relies on the scheduled commercial airline service that is available at Laramie Regional Airport, they also occasionally utilize general aviation and air cargo services. The University has an aircraft based at Laramie Regional, and they use it frequently for travel to various parts of the state. In particular, general aviation is key to upholding the University's longstanding tradition of "Saturday University." For Saturday University, faculty travel to various locales in Wyoming and meet members of the public to inform on the University's

Agency/Organization	Narrative
	missions, goals, and objectives. The University benefits from scheduled commercial airline service in many ways, especially when traveling to conduct research and to attend conferences in different across the country. Scheduled commercial airline service also benefits students, family, visiting professors/lecturers, and others providing air access to and from Laramie. Air cargo is also crucial to the University's success, as it allows for the efficient delivery of scientific equipment and lab and teaching supplies.
State of Wyoming, Department of Environmental Quality	The Wyoming Department of Environmental Quality is charged with protecting, conserving, and enhancing Wyoming's land, air, and water resources. The Department utilizes general aviation, chartering the Wyoming state plane to attend public meetings. It is often far more efficient to charter the plane than to drive to meeting locations. In addition, the Department has field offices in Lander, Casper, and Sheridan. A three- or four-hour one-way drive can be reduced to a 45-minute flight. The Department also uses scheduled commercial air service to attend out-of-state conferences, committee meetings, and various training sessions. Air cargo is also important to increasing the efficiency of the organization, given the length of time ground shipping can take to reach more remote locations in Wyoming. The Department uses FedEx and UPS for overnight shipping when time is of the essence.
State Parks and Cultural Resources	The State Parks and Cultural Resources agency of Wyoming is tasked with supporting and managing Wyoming's state parks and historic sites. Given Wyoming's vast expanses of both national and state parks that draw tourists from all over the world, commercial air service is crucial for visitor access. Fees paid by visitors to the state parks are an important source of revenue. The Outdoor Recreation Office within State Parks relies heavily on commercial air service at airports in Casper, Cody, Riverton, and Jackson to provide access for visitors to the state. Within the parks themselves, visitors may go on guided fishing or hunting trips, horse packing trips, or any variety of activities that Wyoming's parks are known for. Within the agency, some staff rely on commercial air service to attend national meetings like the National Governor's Association and the National Association of State Parks Directors. Other times, staff rely on commercial air service to attend training sessions that take place in other states.
Upton Economic Development Board	The Upton Economic Development Board promotes and encourages economic development in Upton, Wyoming. The Board indicates that the Northeast Wyoming Regional Airport in Gillette is key to economic development in the area. Representatives of government agencies, business corporations, BNSF Railroad Executives, and other business prospects rely on aviation. The airport supports the Tiger Transfer, LLC - Upton Logistics Center; this Center hosts 4,000 railcars each year and serves as a distribution and receiving point for a wide variety of materials. Some stakeholders also use general aviation and commercial air service helps support both business development and residential growth to the community. The Board indicates that Wyoming airports provide access for tourism, hunting, and economic development activities, while supporting a variety of urban, suburban, and rural development in the state. The Board believes that air access is essential for economic development because having diverse forms of transportation for people and products makes Wyoming more attractive to growing businesses, better suited to retain a talented workforce, and able to develop strong communities.
Washakie Development Association	The Washakie Development Association is an organization dedicated to promoting economic development in Washakie County. Their goal is to provide local businesses with the opportunities and resources that they need to thrive. The Association reports that Worland Municipal Airport supports many business and individuals who travel rely on the availability of general aviation services and hangar space to support their business travel. Given the area's size and population, the airport helps to support essential medical and emergency services. Guardian Flight, an air medical company based at Worland Municipal Airport, is crucial to providing medical services and transporting residents when needed. Air medical services are also important for area businesses who need access to healthcare and other medical services for their employees and their families.
WYDOT - Engineering and Planning Division	The Wyoming Department of Transportation's Engineering & Planning Division assists with engineering and planning projects across the state. With a general aviation plane based at the Cheyenne Regional Airport, the Division makes many trips to various locations across the state, including Jackson, Cody, and Sheridan. Driving to these locations can take up to seven hours each way. Trips made by this Department are mostly for highway-related work, including project inspections and public meetings. When landslides, rockfalls, and flooding occur, general aviation flights allow the Department to be on site for inspections

Agency/Organization	Narrative
	and medication as quickly as possible. Using general aviation aircraft quickly transports staff to the affected areas, most often which are in the North and Northwest areas of the state, easily an eight-hour drive from Cheyenne. Commercial air service is also important for the Department and its staff so that they can attend training sessions not offered in Wyoming and provides their staff with opportunities to collaborate with national engineering and planning organizations. Air cargo can be used when lab testing equipment breaks, and it is important to ship this equipment to a vendor/supplier for quick repair.
Wyoming Public Service Commission	The Wyoming Public Service Commission regulates public utilities within the state, including electricity, natural gas, and telephone, as well as some commercial water utilities and intrastate pipelines. There are roughly thirty staff within the organization, and the commissioners and specialized staff travel to remote parts of the state to address various issues. In many cases, flying saves both time and money. There are also numerous conferences and training sessions throughout the country that agency staff attend. In these cases, staff utilize the commercial air service at Cheyenne Regional Airport to travel to these conferences. In some circumstances, it is crucial for the Commission to utilize priority air shipping for overnight document transport.
Wyoming Board of Parole	The Wyoming Board of Parole is the decision-making authority in charge of granting paroles to release inmates to community supervision. The Board uses general aviation to travel between various Wyoming airports, including those in Worland, Rock Springs, Rawlins, Riverton, Casper, and Newcastle. In winter months, difficult road conditions, due to weather, can make traveling across the state to hearings very difficult to impossible. In these circumstances, a general aviation plane is chartered to transport Board representatives to and from parole hearings. Occasionally, commercial air service is utilized by the Board for out-of-state training. Access to both commercial air service and general aviation helps to enhance the efficiency of the Board's work by reducing the possibility of travel delays. Air travel also reduces the numbers of days that the hearings themselves take. Using general aviation reduces travel time from days to hours, significantly improving efficiency.
Wyoming Business Council	The Wyoming Business Council works to diversify Wyoming's economy by serving businesses and entrepreneurs, working with them to create new economic opportunities in Wyoming. They charter the Wyoming's state plane for when pursuing various economic development prospects, including hosting VIP business prospects in communities which include Cheyenne, Sheridan, Evanston, and Casper. Commercial air service to and from Wyoming is key to business recruitment, retention, and economic development and diversification. The Business Council takes dozens of commercial flights every year to attend client meetings in other states, to participate in conferences and trade shows, and to support foreign trade missions. While many life-long Wyomingites are used to long travel times, Wyoming businesses need quick, efficient, and timely access to access to domestic and international markets. Commercial air service provides that essential connection. Air cargo is also important to the Wyoming Business Council's mission. As an example, air cargo is instrumental in transporting beef originating in Powell all the way to Taiwan. Foreign trade like this is critical to connecting Wyoming's economy to the global economy.
Wyoming Community College Commission	The Wyoming Community College Commission coordinates with community colleges across the state on programs, planning, and system-wide goals. Community colleges in Wyoming have nearly 1,800 faculty and staff and 29,000 students. As part of the post-secondary attainment Executive Council, there are multiple meetings in the state, and a key aspect of attending these meeting is the ability to fly members of the Executive Council and state legislators to and from the meetings. There are additional meetings held throughout the state, including meetings in Cheyenne, Rock Springs, Sheridan, Cody, and Riverton. Meetings are held in various locations so that members of the Commission are aware of the full scope of the community college system within Wyoming. Because of the significant drive times between some of these locations, flying is often far more efficient than driving. In some instances, commercial air service is used for out-of-state travel. For example, obtaining a National Geospatial-Intelligence Agency Academic Research Program (NGA) grant required attendance of Commissions members at meetings in St. Louis and Chicago, so participants used scheduled commercial airline service from Cheyenne and Riverton to attend these meetings. Both general aviation and commercial air service are important to the Commission's mission, allowing individuals to serve multiple roles and increase the efficiency of the Commission's very limited staff. Businesses in Wyoming

Agency/Organization	Narrative
	rely on community colleges for skilled labor, so aviation is crucial to both the colleges and to workforce development in the state.
Wyoming Department of Agriculture	The Wyoming Department of Agriculture is a state agency dedicated to the promotion and enhancement of agriculture in Wyoming, along with the state's natural resources and quality of life. Aviation and the public airports are important to fulfilling the agency's role and the department relies on general aviation, commercial service, and air cargo to support its activities and mission. Representatives of the Department charter general aviation planes several times per year, primarily for intra-state flights. The Department frequently uses airports in Cheyenne, Pinedale, Cody, Casper, Gillette, Lander, and Riverton, among others. The Department supports the Wyoming Brucellosis Coordination Team; the team depends on general aviation to meet its obligations in the communities most impacted by brucellosis in cattle and wildlife. The Department also relies on commercial air service in Wyoming, as they fly personnel to complete training certifications across the country. Leadership in the Department also utilizes commercial air service to support international trade for agriculture as well as to attend national meetings of other State Departments of Agriculture. The Department utilizes air cargo for time sensitive shipments of laboratory samples; the Wyoming State Chemist often relies on air shipments when testing livestock for disease. Air service is crucial for Wyoming because it helps to ensure that Wyoming's agricultural industry is competitive with other states and countries. General aviation increases in-state travel efficiency for the Department, commercial air service increases connectivity for employees of the Department to other states, and air cargo is used to expedite time sensitive lab testing that important to the Department's mission.
Wyoming Game and Fish Department	The Wyoming Department of Game & Fish is responsible for regulating fishing and hunting in Wyoming. As part of their responsibilities, they conduct extensive aerial surveys to get accurate counts of a variety of wildlife species, including mule deer, elk, and moose. These counts are crucial to obtaining a representative sample of the population for each. Aside from those aerial surveys, the Department uses the state plane twice per year, flying into Casper and Jackson for various meetings with Department leadership. The Department also uses commercial air service for travel to out-of-state conferences and meetings. Occasionally, the Department also relies on air for the overnighting time sensitive mail.
Wyoming Retirement System	Wyoming's Retirement System provides important retirement services for the employees of over 700 public employers throughout the state. Member of this agency charter general aviation aircraft and also use commercial air service to fulfill their responsibilities as the managers of Wyoming's public retirement programs. Much of their travel is within the state so general aviation is important reducing travel times and improving their efficiency. The agency's investment team rents the Wyoming state plane several times each year to support their travel needs; this includes travel to Afton for a Volunteer Pension Board meeting. Employees of the Retirement System rely on general aviation flights to travel between various airports in Wyoming, including Cheyenne, Riverton, and Jackson. In some cases, Trustees of the system are picked up in those cities by general aviation aircraft, which saves time and improves efficiency. The investment team also uses scheduled commercial airline service to travel to New York and other investment hubs to meet with money managers, attend conferences, and to address other responsibilities which require out-of-state travel. Occasionally, this agency uses air cargo is used when staff needs to overnight packages/documents to a legislative liaison or trustee.
Wyoming SBDC Network	The Wyoming SBDC Network is a partnership between the University of Wyoming, the Wyoming Business Council, and the U.S. Small Business Administration. The Network provides small businesses with expertise technical assistance to support various aspects of the development and operating needs. Small businesses in Wyoming utilize aviation to increase their efficiency, especially when traveling long distances for conferences and other meetings. The Wyoming SBDC Network has members that use the airports in Laramie, Gillette, Cody, Riverton, Rock Springs, and Casper, and staff from the Network use commercial air service to travel for professional development and other work-related activities.
Wyoming State Construction Department	The Wyoming State Construction Department (SCD) oversees the planning, design, construction, and preservation of state buildings, community colleges, and K-12 schools throughout Wyoming. Its roughly 44 members use both general aviation and commercial airline flights to fulfill their obligations to the state. Because there are development projects across the state that the SCD is responsible for, they use the

Agency/Organization	Narrative
	state-owned general aviation plane to visit development sites and other state agencies and to attend Department meetings. The Department's intrastate general aviation travel most often involves flights to airports serving Rawlins, Lander, Evanston, Casper, and Jackson. For out-of-state conferences and business meetings, the SCD often uses scheduled commercial airline flights to make travel time more efficient.
Wyoming Stock Growers Association	The Wyoming Stock Growers Association is an advocacy, information, and promotion association whose goal is to serve livestock businesses and families in Wyoming. With over nine-hundred members across the state, several members own general aviation aircraft that are based at local airports throughout the state. Airports in Wyoming allow members of the Association to get to and from various areas of the state much quicker than driving. While the Wyoming Stock Growers Association is focused on Wyomingites, many of the goods produced by its members are exported to other states and even other countries; air transport facilitates trade. Commercial air service is crucial for Association staff to travel to out-of-state meetings. The Association also uses commercial air service to fly in speakers for various events.
WYDOT Photogrammetry & Surveys Section	The WYDOT Photogrammetry & Surveys Section is a seventeen-person division of Engineering and Technical Programs within Wyoming Department of Transportation. The Photogrammetry Section creates and maintains terrain and mapping files, and the Surveys Section uses GPS and digital leveling equipment to establish coordinates for project control monuments. This section of WYDOT has a Cessna Caravan with an on-board digital mapping camera. The plane is based in Cheyenne Regional Airport, but this section of WYDOT utilizes airports all around the state. Most frequently they use airports in Casper, Jackson, Cody, Riverton, and Sheridan. Staff make nearly two dozen flights around the state each year. When needed, staff use commercial air service to fly to out-of-state national conferences.

10.4.2 Summary of Agency Benefits

Those responding to the agency survey identified many reasons that they rely on and benefit from aviation services that are supported by study airports. Key benefits that state, regional, and local agencies receive as a result of their reliance on study airports follow:

- Healthcare/Medical and Emergency Services – many of the agencies that responded to the survey are responsible for recruiting and retaining high quality jobs in Wyoming. As the case study on hospitals/EMS operators indicated, given the rural nature of the state, aviation and airports play an important role in supplementing medical, healthcare, and emergency services. Responding agencies note that the role airports play in bringing medical specialists and their services to Wyoming communities is often essential in their business recruitment efforts.
- Air Service – all agencies, engaged in economic development efforts, confirmed through the survey effort that access to scheduled commercial airline service is very important to Wyoming's ability to effectively compete for and attract jobs and economic development. Many businesses rely on commercial airline travel for their employees. In addition, businesses located in Wyoming often have customers, suppliers, and vendors that need to travel to them. There is often no substitute for the convenience of commercial airline travel. Study research at the airport level confirms that there are hundreds of businesses in communities throughout the state that rely on commercial airline service. Study surveys show that employers providing professional services and engaged in mining and energy industries are the types of businesses that most often depend on commercial airline travel. Recognizing the importance of commercial airline service, the Wyoming Department of Transportation has a program to provide financial support for commercial air service at the nine commercial airports.
- Lifestyle – many companies choose to locate in Wyoming because of the lifestyle that the state affords them and their employees. However, just because a business chooses to locate in a less developed or more rural area, that does not mean that they do not have a need for the accessibility and connectivity that can only be provided by air travel. Agencies and other replying to the survey highlight how important access to one of the general aviation airports in Wyoming can be. Corporate, chartered, or rented general aviation aircraft, supported by study airports, open-up communities in Wyoming to a

wide variety of economic development opportunities. According to various agencies participating in the study survey, these opportunities would not be available without the accessibility that is provided by Wyoming's general aviation airports.

- Time Savings – instate travel in Wyoming can be very time consuming. Agencies, especially state agencies, have responsibilities that extend to communities throughout the state. Highway travel from one city to another can take more than one day in each direction and sometimes becomes impossible because of weather conditions. Almost every agency responding to the survey identified the study airports as being essential to improving the efficiency of the instate travel, cutting trips from days to hours. There are some agencies that operate in Wyoming such as the Bureau of Land Management, Game and Fish, and the Department of Agriculture that have monitoring and surveillance responsibilities that span the state. Without aerial observation capabilities that supported by almost all study airports, these agencies simply would not be able to carry out their duties and responsibilities.

10.5 Conclusions

Previous sections of this report show the significant economic impact that the study airports have on the Wyoming economy. This section of the report provides insight into benefits associated with the study airports that cannot be quantified from an economic standpoint. The case studies show how study airports support operations by aerial applicators who provide services to the state's agricultural and forest industries; both of these industries are key contributors to the state's economy. Study airports support aerial applicators who are based in Wyoming as well as well as those that operate in the state on a transient or visiting basis. On average, Wyoming has about 600 wildfires a year. Study airports play important roles in supporting aerial firefighting. A few airports have permanent or semi-permanent facilities that support the aerial firefighting activities for the Bureau of Land Management, the Air Guard, and/or the Forest Service. Even those airports that do not have fixed firefighting facilities are often called upon to support aerial firefighting.

Essentially, there is not an airport in the state that does not help support medical, healthcare, and/or emergency medical services. Airports serve as an access point for various types of medical professionals that fly from larger communities in Wyoming, as well as from points outside the state, to provide various medical services to patients. Rather than patients going to the doctor, the doctor comes to the patient. Study airports also help to transport patients from small hospitals and clinics to larger hospitals both within and beyond the state, when conditions warrant. Also, accident victims in Wyoming are also sometimes transported by air, either to hospitals in Wyoming or in neighboring states. Airports in Wyoming support daily healthcare needs and sometimes help to save lives.

Finally, agencies throughout Wyoming confirmed the importance of the study airports. Airports and air service are critical to supporting economic development and job attraction and retention. Airports also are important to supporting efficient instate travel for many agencies, and these same airports are essential for some agencies to complete their missions and responsibilities.

The WYDOT study has documented economic contributions that the 34 study airports support, but this section helps to highlight other benefits supported by these same airports that cannot be assigned a dollar value.

11. Baseline Economic Impact of UAS in Wyoming

11.1 Introduction

As aviation in Wyoming and across the country undergoes technological change, Unmanned Aerial Vehicles (UAVs), sometimes referred to as drones, have become more common. Unmanned Aerial Systems (UAS), often synonymous with UAVs, are the various "parts" that make a UAV function. These parts include all cameras and computer software, as well as the person controlling the UAV. For WYDOT's statewide economic impact study, research was conducted to provide a better understanding of the current impact of commercial UAS activities in Wyoming. The focus of the research was to provide a baseline understanding of UAS activities in Wyoming regarding personnel, spending, UAV operations, and economic impacts.

UAVs typically act as a tool for a business or government agency that enhance or supplement existing non-aviation or aviation-related functions. UAVs support a variety of sectors that most often include photography; surveying; pipeline and powerline inspections; engineering; and local government activities.

11.2 The Regulatory Framework for Commercial Use of UAS

Prior to 2016, the commercial use of drones was far less prominent than today, due to technological, economic, and regulatory limitations. In 2016, a Section 333 exemption from the FAA was the only legal way to operate a drone commercially. While some users were able to navigate the Section 333 process, obtaining an exemption under these rules was complicated and expensive. Among other requirements, operating drones under Section 333 rules required an individual with a pilot's license to be present in all operational circumstances. To help improve the viability of commercial use of drones, the FAA introduced Part 107 in 2016. Part 107 serves as the FAA's Small UAS Rule. This rule established requirements for obtaining a remote pilot certificate, obtained by meeting several qualifications and passing an initial aeronautical knowledge exam. While there are several other means to operate a drone commercially, including some exceptions for non-commercial operators such as local governments and educational institutions, obtaining a Part 107 remote pilot certificate is by far the most common way to obtain a commercial operator's license.

11.3 National and Statewide UAS Trends

The U.S. Civil Airmen Statistics is a database published annually by the FAA which contains statistics about airmen in the U.S., including pilots for commercial and general aviation aircraft, as well as non-pilot aviation-related occupations like flight attendants and aircraft mechanics. Since 2016, this database has included estimates related to the number of remote pilots; in other words, those piloting UAVs. Nationally, the number of remote pilots in the FAA database has increased from 20,362 in 2016 to 160,302 in 2019, an average annual growth rate (AAGR) of 99 percent.

While the U.S. Civil Airmen Statistics represent one estimate for the number of remote pilots in the US, the Center for the Study of the Drone at Bard College issued a report in April 2017 found that there were 102 Part 107 pilots in Wyoming, a number that has likely grown since then based on the trends identified in FAA's airmen's database. In addition to the count of Part 107 certificates, the study also found that there were 268 non-hobbyist drones in Wyoming. This number of drones compares favorably with the number of commercial drones in Wyoming identified in this WYDOT research.

11.4 Methodology & Data Collection Process

In order to document the baseline economic impact of UAS/UAV activities in Wyoming, an online survey was developed as the primary means of data collection. The survey contained questions regarding the number of

UAS users/employees within the organization; the number of UAVs owned/operated by the survey respondent; payroll and spending on UAS/UAV activities; operational data; and qualitative use information. A list of relevant organizations to survey for the WYDOT research was developed by compiling information from the FAA Civil Airmen remote pilot database, as well as through additional online research. Once a list of organizations involved in UAS/UAV activities was gathered, the survey was sent via email to all organizations. An additional email and follow-up calls were made to non-respondents. The survey data was compiled and entered into an economic input/output model which produced a baseline economic impact for UAS/UAV operations in Wyoming.

Direct impacts are the first stage of the economic cycle, in which direct UAS/UAV impacts flow into other sectors of the economy. An econometric input/output model, referred to in this section as IMPLAN, was used to estimate additional indirect and induced impacts, sometimes known as a multiplier effect, which trigger additional impacts. For this study, a statewide model was used to develop economic impact estimates. Indirect and induced impacts are experienced in the state economy as a result of the initial direct impacts. Indirect impacts result from industries purchasing from other industries, whereas induced impacts result from the expenditure of new household income associated with direct and indirect impacts. When summed, direct, indirect, and induced impacts equal total annual economic impacts. More information on IMPLAN and the economic impact modeling process can be found in Section 4 of this report.

When survey data did not provide payroll information, IMPLAN modeling was used to estimate payroll averages by service/activity type. When spending was not provided, an average spend per UAV was developed using survey data. UAV spending reflects the organization's investment and operating expenses for typical commercial UAV operations. It is also worth noting that service/activities types were assigned to all survey respondents. Categories included aerial photography/videography; agriculture/forest observations and applications; natural resources inspections, engineering and surveying; local government use; military use; pipe and powerline inspections; educational research; wildlife observations; and UAS/UAV manufacturing.

11.5 Data Collection Results

The study research identified 87 different organizations/entities utilizing UAV commercially in Wyoming. Between those organizations, there are 159 individuals that identified themselves as having some involvement in UAS/UAV activities. When requesting the percent of time those individuals spend on UAS/UAV in a typical week, 81 full-time equivalent (FTE) positions were identified. Of the 159 employees identified, many were not 100% devoted to UAS/UAV functions. Based on the number of hours these individuals work on UAS/UAV related activities, it was determined that the 159 less than full-time positions equal 81 full-time jobs or FTEs.

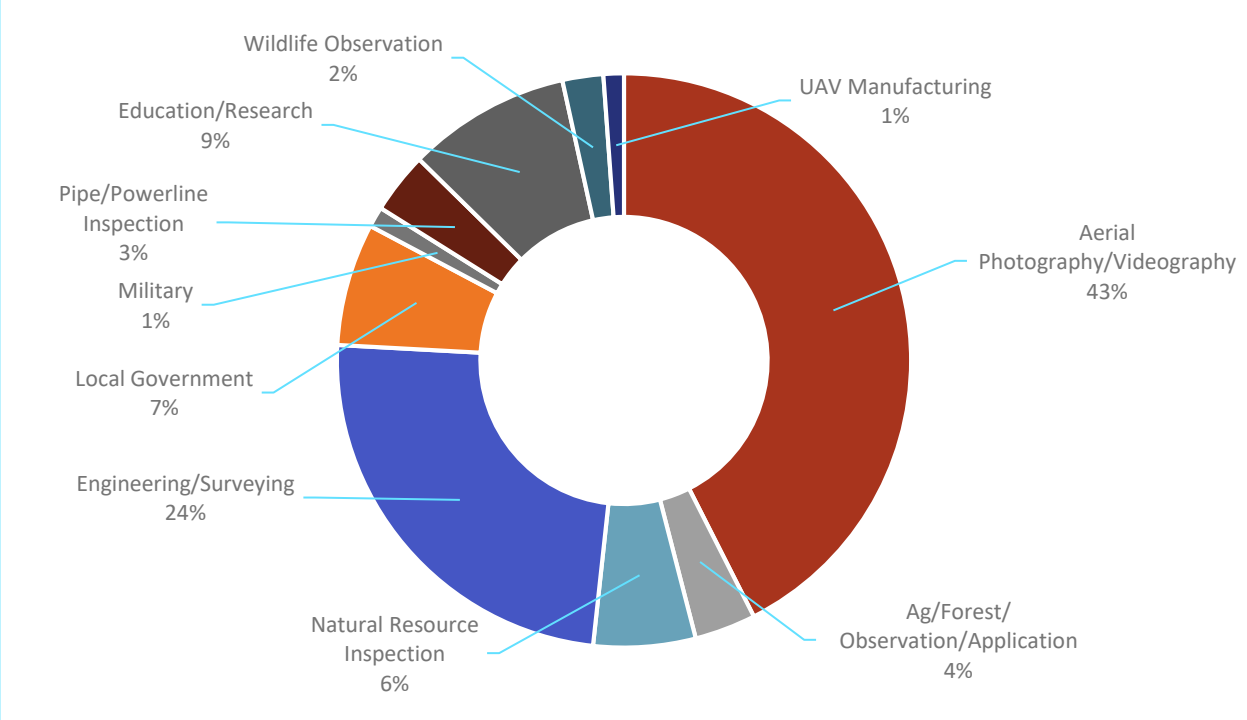
Aerial photography is the largest service type, with 43% of all respondents indicating that they rely on UAV for activities that involve aerial photography. Following that, engineering/surveying organizations represent the second largest user group with 24%. Each of the other service types represent less than 10% for all respondents. These findings are displayed below, in **Table 11-1** and **Figure 11-1**.

Table 11-1: Organization Service Type and UAS/UAV Employment by Organization

Service Type	Number of Entities Identified with UAV Operations	Entities as Percent of Total	UAV/UAS Employment by Entity (FTE)	FTE Percent of Total Employment
Aerial Photography/Videography	37	43%	23	28%
Ag/Forest/ Observation/Application	3	3%	3	4%
Natural Resource Inspection	5	6%	6	7%
Engineering/Surveying	21	24%	18	22%

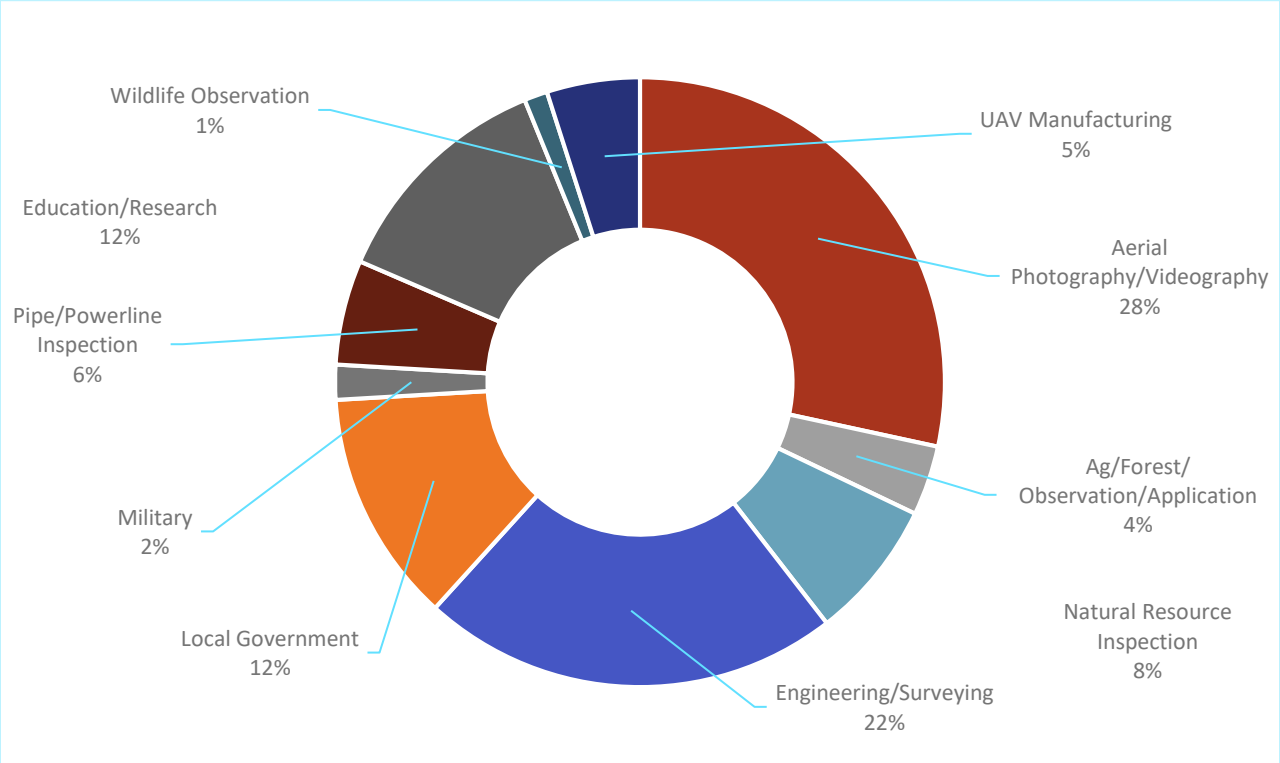
Service Type	Number of Entities Identified with UAV Operations	Entities as Percent of Total	UAV/UAS Employment by Entity (FTE)	FTE Percent of Total Employment
Local Government	6	7%	10	12%
Military	1	1%	2	2%
Pipe/Powerline Inspection	3	3%	5	6%
Education/Research	8	9%	10	12%
Wildlife Observation	2	2%	1	1%
UAV Manufacturing	1	1%	4	5%
Total	**87**	**100%**	**81**	**100%**

Figure 11-1: Distribution of Wyoming UAV Users by Service Type



When analyzing the distribution of employment by service type, the results change somewhat. Employment for the aerial photography/videography service category still makes up the largest percentage of employment with 28% of all UAS/UAV employees, and engineering/surveying comprise 22% of all identified UAS/UAV employment. After that, local government and education/research account for 12% each of the identified employment, with each of the other service types comprising less than 10% of the total employment. This information is displayed below in **Figure 11-2.**

Figure 11-2: Distribution of Wyoming UAV-Related Employment by Service Type



Overall, for all service types/organizations, 235 UAVs were identified. Survey data yielded an average payroll of $39,154 per full-time equivalent; this payroll accounts for the percentage of time an individual spends exclusively on UAV work. In other words, while an engineer's average annual salary might be $110,000, the $39,154 represents the portion of that salary that is devoted exclusively to UAS/UAV activities. Average spending per UAV was identified at $5,687, which accounts for the expenses associated with commercial UAVs, including acquisition, software, maintenance, and other miscellaneous expenses.

Survey data shows that the average number of UAV operations annually by organization is 87, or roughly 7 per month, and there is an average of 2.7 drones per responding organization. The average time of flight per operation is 27 minutes, which when converted into annual flight hours is 3,452 hours. These figures are displayed below in **Table 11-2.**

Table 11-2: Summary Analysis

Impact Category	Impact Value
Number of Organizations	87
Number of Related Individuals	159
Number of FTE	81
Average Payroll/FTE	$39,154
Spending per Drone	$5,687
Average Ops/Year	87
Average Length of Ops	27 minutes
Number of Drones	235

Impact Category	Impact Value
Average Drones/Organization	2.7
Annual flight hours	3,452

11.6 Baseline Economic impacts of UAS in Wyoming

The information in **Table 11-2** reflects direct economic activity associated with commercial UAS/UAV activity in Wyoming. These direct impacts for employment, payroll, and spending are entered into the IMPLAN model to identify other indirect/induced impacts that the direct impacts generate in the state's economy.

After estimating indirect and induced impacts, using the IMPLAN model, the total employment associated with UAS/UAV activities in Wyoming is estimated 121 FTEs. These 121 FTEs have a total annual (direct plus indirect/induced) payroll estimated at $5.7 million. Total annual spending for the commercial 235 drones operating in Wyoming is estimated at $3.5 million. Combined total annual payroll and spending for UAS/UAV activities equals approximately $9.2 million in annual economic activity. These figures are displayed below in **Table 11-3**.

Table 11-3: Baseline Economic Impacts of UAS/UAV Activities in Wyoming

Impact Type	Direct	Indirect/Induced	Total
Employment (FTEs)	81	40	121
Payroll	$4,081,730	$1,649,030	$5,730,760
Spending	$2,397,780	$1,076,370	$3,474,150
Annual Economic Activity	$6,479,500	$2,725,400	$9,204,900

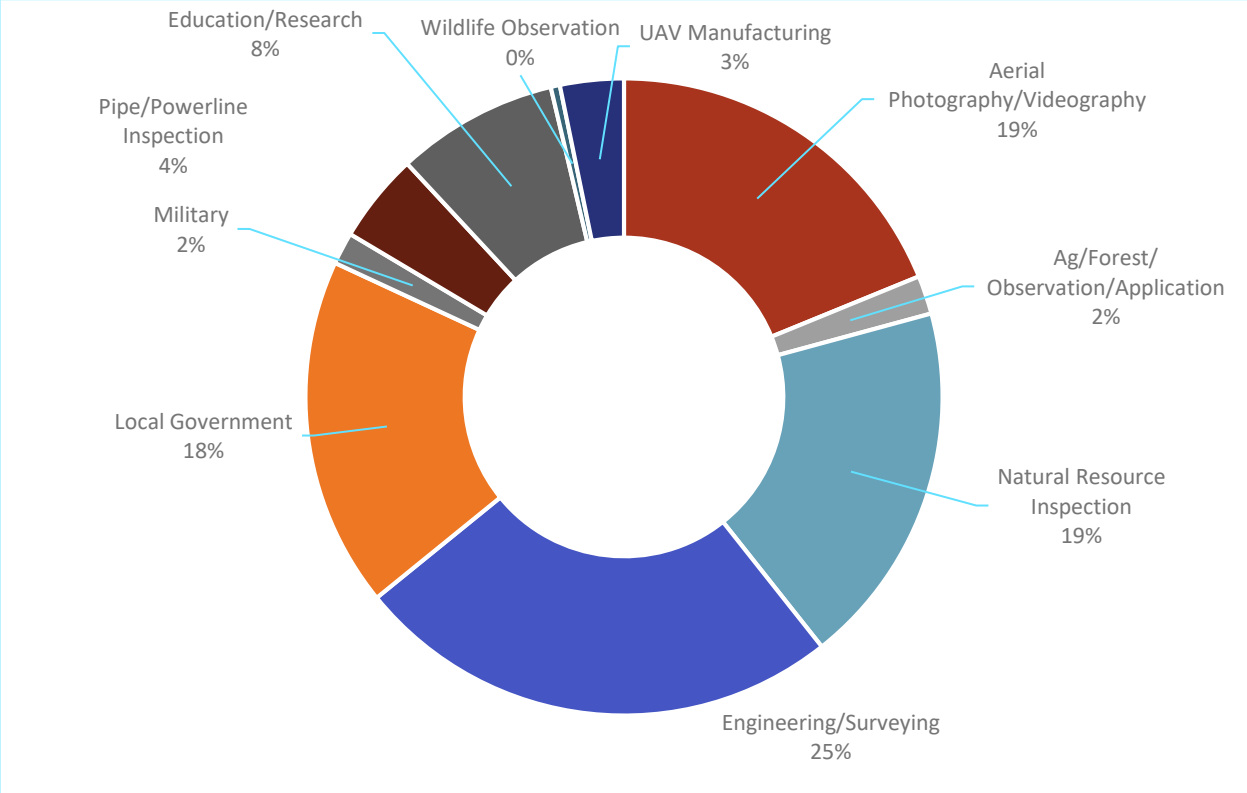
When comparing economic impact by service/activity type, engineering and surveying organizations represent the largest portion of the impact at roughly 25% of the total estimated annual economic activity. Natural resource inspection, aerial photography/videography, and local government use represent similar percentages of the annual estimate economic activity with 18% to 19% of the total. These four categories sum to approximately 81% of the total annual estimated UAS/UAV economic impact in Wyoming; the remaining service categories account for the remainder of the impact. These results are displayed below in **Table 11-4** and **Figure 11-3.**

Table 11-4: UAS/UAV Economic Impacts by Service Type

Service Type	Total Annual Economic Activity	Percent of Total UAV Economic Impact
Aerial Photography/Videography	$1,732,680	19%
Ag/Forest/ Observation/Application	$179,850	2%
Natural Resource Inspection	$1,708,310	19%
Engineering/Surveying	$2,283,600	25%
Local Government	$1,635,600	18%
Military	$150,030	2%
Pipe/Powerline Inspection	$417,780	5%

Service Type	Total Annual Economic Activity	Percent of Total UAV Economic Impact
Education/Research	$756,850	8%
Wildlife Observation	$42,610	<1%
UAV Manufacturing	$297,600	3%
Total	**$9,204,900**	**100%**

Figure 11-3: Distribution of UAV Economic Impacts by Service Type



11.7 The Qualitative Impact of UAS/UAV Activity in Wyoming

While the quantitative economic impact documented in the previous section demonstrate the value of UAS/UAV activities in Wyoming, qualitative information from UAV users also serves to highlight how various users have integrated UAV into their operations to add value and efficiency. Below are survey responses that help to provide context for UAV benefits[22].

Camp Guernsey Joint Training Center's Integrated Training Area Management (ITAM), Guernsey, WY

Camp Guernsey ITAM employs a sUAS as a tool to quantify and identify military maneuver damage to Major Training Areas. The system operates multi-spec and Near IR filters during the same flight, so vegetation health

[22] Quotes may have minor edits for clarity. sUAS refers to UAS weighing less than 55lbs, which are eligible for remote pilot certifications.

is also captured. That data is used to feed directly into Ag Precision GPS units on tractors in order to increase the efficiency of rehabilitation activities. The data is used to keep the tractor operator on target, identifying damage in training areas that can be as large as 7,000 acres. Operational, maintenance, and fuel costs are reduced significantly with the UAS.

Casper Police Department, Casper, WY

We no longer need to use the fire department's ladder truck for external aerial photos or video. This saves time and money for first responders. The sUAS allows rapid deployment for search and rescue, covering large areas.

Land Surveying Inc, Gillette, WY

For large site surveys, a one-hour flight can provide a 3D model of an apartment complex. This gives the client in-depth data that can save a large amount of time for clients and the surveyor. There is a rural benefit with long trips, being able to revisit a site virtually is huge for days of saved effort. Safety is also critical, and not having someone climb helps with this effort. Data from a drone flight is very helpful and saves plenty of man hours. UAS has been a boon for the company and is not being utilized enough by clients and the industry.

Ron Nettie Photography

My drones (sUAS) are used to capture still photographs and video for local real estate agencies, providing their clients with aerial perspectives not achieved through the use of ground-based cameras, etc. The ability for me to fly drones for this purpose is invaluable for my photography business, thus allowing my business to be a step above others in this industry.

11.8 Summary/Conclusion

UAS/UAV technology is rapidly evolving and growing, and this estimate provides a baseline for statewide economic impacts from commercial UAS/UAV operations that can be updated in the future. It is worth noting that many non-hobbyist UAV operators likely operate outside of Part 107 rules, as some surveyed users noted. Because this study relied primarily on databases drawing from the Civil Airmen's remote pilot database, the economic impacts of non-licensed users are not included in the baseline impacts. Impacts measured here are those where active UAV operational users could be identified.

While the longer-term impacts of UAV/UAS technology are not yet fully understood, the technology is already playing an important role in a variety of industries and that role is likely to grow. As more industries find application for UAV and the regulatory framework for commercial operation continues to evolve, the industry will continue to grow, and its economic impacts will expand.

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12. Impacts by Legislative District

Wyoming's State Legislature is comprised of 30 State Senate Districts and 60 State House Districts. Current 2020 state legislative districts, Senate and House, are depicted in **Figure 12-1** and **Figure 12-2**.

Figure 12-1: State Senate Districts

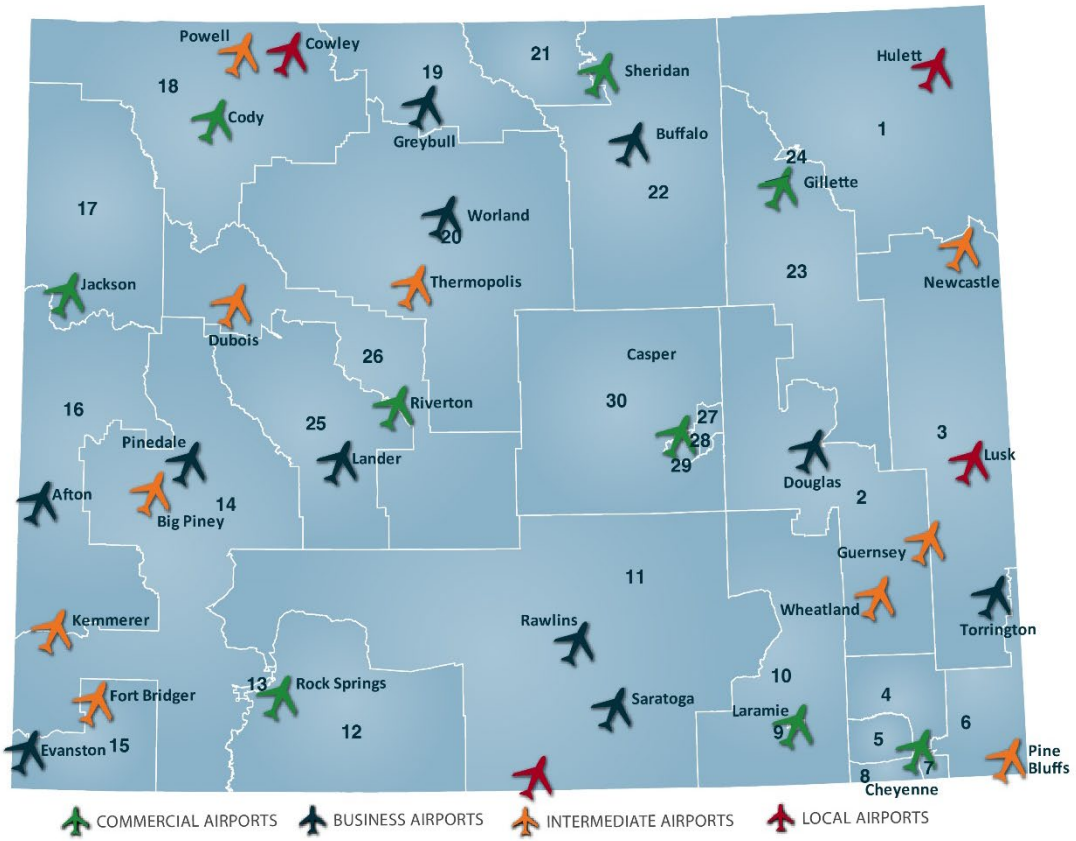
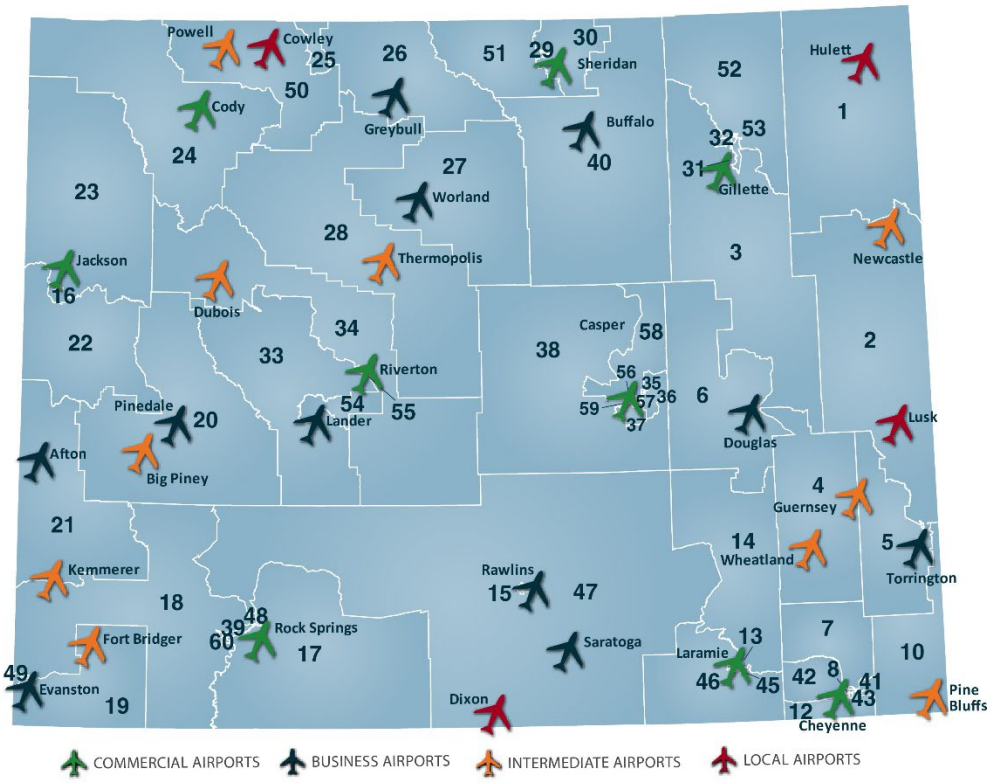


Figure 12-2: State House Districts



Study airports play different roles in serving the air transportation needs of the districts. Sometimes airports that serve the House or Senate district are physically located in the district; other times, the airport is in proximity to the district. WYDOT staff were responsible for determine which airports serve each State and House district. It is important to note that in this process, depending on the district boundary and the location of the airport, some airports were determined to be serving more than one district. This is especially true for the nine commercial service airports that have larger market areas.

As part of this study, direct economic impacts were identified for five categories: airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures. A state IMPLAN model was used to determine the additional statewide indirect and induced impacts that the initial direct impacts generate, once they enter the state's economy. Section 4 of this report provides more information on the IMPLAN model and on the process to estimate indirect and induced impacts. Four measurements employment, payroll, spending, and economic activity are used to report each airport's total annual economic impact for each of the impact categories. In the WYDOT analysis, each airport's total annual economic activity is the sum of payroll and spending.

Table 12-1 and **Table 12-2** provide information that shows which airports were assigned to each Senate and House district. **Table 12-3** and **Table 12-4** show the total annual economic impact for all airports assigned to each of the Senate districts and each of the House districts, respectively. As part of the WYDOT economic impact analysis, impacts associated with just the commercial airline functions at the nine commercial service airports were isolated. Section 8 of this report presents the results of that analysis. If a commercial service airport is assigned to the district, the economic impacts of just commercial airline functions and activities for that airport(s) are also shown in **Table 12-3** and **Table 12-4**. As part of the study's analysis, steps were taken to estimate annual state and local sales tax revenues that each airport supports. Using only direct impacts,

state and local sales tax associated with airport-supported spending are estimated. Sales tax revenues from airport management, business tenant, capital, and visitor spending are estimated. All employees whose jobs are airport-supported also spend a portion of their annual income on items that are subject to sales tax. These taxes were also estimated in the WYDOT analysis. State and local sales tax revenues supported by airports in each district are also shown in **Table 12-3** and **Table 12-4**.

It is important to note that the economic impacts presented in **Table 12-3** and **Table 12-4** are not additive since some airports are assigned to multiple districts.

Appendix C to this report provides additional information that shows the total annual economic impact of each specific airport assigned to each district. Specific reports summarizing district specific and statewide economic impacts for all study airports have been prepared as part of WYDOT's 2020 Aviation Economic Impact Study. Reports for each district are available at: http://www.dot.state.wy.us/home/aeronautics.html.

Table 12-1: Airports by Senate District

2020 Senate District	Airport ID	City	Airport Name
1	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	ECS	Newcastle	Newcastle - Mondell Field
	W43	Hulett	Hulett Municipal Airport
2	CPR	Casper	Casper - Natrona County International Airport
	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
	DGW	Douglas	Douglas - Converse County Airport
	GUR	Guernsey	Guernsey - Camp Guernsey Army Airfield
	EAN	Wheatland	Wheatland - Phifer Airfield
3	CPR	Casper	Casper - Natrona County International Airport
	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	DGW	Douglas	Douglas - Converse County Airport
	TOR	Torrington	Torrington Municipal Airport
	GUR	Guernsey	Guernsey - Camp Guernsey Army Airfield
	ECS	Newcastle	Newcastle - Mondell Field
	LSK	Lusk	Lusk Municipal Airport
4	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
5	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
6	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
	TOR	Torrington	Torrington Municipal Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
7	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
8	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
9	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
10	CPR	Casper	Casper - Natrona County International Airport
	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olson Field
	LAR	Laramie	Laramie Regional Airport
11	CPR	Casper	Casper - Natrona County International Airport
	LAR	Laramie	Laramie Regional Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	RWL	Rawlins	Rawlins Municipal Airport - Harvey Field

2020 Senate District	Airport ID	City	Airport Name
	SAA	Saratoga	Saratoga - Shively Field
	DWX	Dixon	Dixon Airport
12	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
13	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
14	JAC	Jackson	Jackson Hole Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	AFO	Afton	Afton - Lincoln County Municipal Airport
	EVW	Evanston	Evanston-Uinta County Airport - Burns Field
	PNA	Pinedale	Pinedale - Ralph Wenz Field
	BPI	Big Piney	Big Piney - Miley Memorial Field
	FBR	Fort Bridger	Fort Bridger Airport
	EMM	Kemmerer	Kemmerer Municipal Airport
15	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	EVW	Evanston	Evanston-Uinta County Airport - Burns Field
	FBR	Fort Bridger	Fort Bridger Airport
16	JAC	Jackson	Jackson Hole Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	AFO	Afton	Afton - Lincoln County Municipal Airport
	PNA	Pinedale	Pinedale - Ralph Wenz Field
	BPI	Big Piney	Big Piney - Miley Memorial Field
	EMM	Kemmerer	Kemmerer Municipal Airport
17	COD	Cody	Cody - Yellowstone Regional Airport
	JAC	Jackson	Jackson Hole Airport
	AFO	Afton	Afton - Lincoln County Municipal Airport
	DUB	Dubois	Dubois Municipal Airport
18	COD	Cody	Cody - Yellowstone Regional Airport
	POY	Powell	Powell Municipal Airport
19	COD	Cody	Cody - Yellowstone Regional Airport
	SHR	Sheridan	Sheridan County Airport
	GEY	Greybull	Greybull - South Big Horn County Airport
	POY	Powell	Powell Municipal Airport
	U68	Cowley	Cowley - North Big Horn County Airport
20	CPR	Casper	Casper - Natrona County International Airport
	COD	Cody	Cody - Yellowstone Regional Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	GEY	Greybull	Greybull - South Big Horn County Airport
	WRL	Worland	Worland Municipal Airport
	POY	Powell	Powell Municipal Airport
	HSG	Thermopolis	Thermopolis - Hot Springs County Airport
21	COD	Cody	Cody - Yellowstone Regional Airport
	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport

2020 Senate District	Airport ID	City	Airport Name
	CPR	Casper	Casper - Natrona County International Airport
22	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
23	CPR	Casper	Casper - Natrona County International Airport
	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
	DGW	Douglas	Douglas - Converse County Airport
	ECS	Newcastle	Newcastle - Mondell Field
24	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
25	JAC	Jackson	Jackson Hole Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	LND	Lander	Lander - Hunt Field
	DUB	Dubois	Dubois Municipal Airport
26	CPR	Casper	Casper - Natrona County International Airport
	JAC	Jackson	Jackson Hole Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	LND	Lander	Lander - Hunt Field
	DUB	Dubois	Dubois Municipal Airport
27	CPR	Casper	Casper - Natrona County International Airport
28	CPR	Casper	Casper - Natrona County International Airport
29	CPR	Casper	Casper - Natrona County International Airport
30	CPR	Casper	Casper - Natrona County International Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport

Table 12-2: Airports by House District

2020 House District	Airport ID	City	Airport Name
1	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	ECS	Newcastle	Newcastle - Mondell Field
	W43	Hulett	Hulett Municipal Airport
2	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	DGW	Douglas	Douglas - Converse County Airport
	TOR	Torrington	Torrington Municipal Airport
	ECS	Newcastle	Newcastle - Mondell Field
3	CPR	Casper	Casper - Natrona County International Airport
	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
	DGW	Douglas	Douglas - Converse County Airport
4	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
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	GUR	Guernsey	Guernsey - Camp Guernsey Army Airfield
5	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
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6	CPR	Casper	Casper - Natrona County International Airport
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7	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
8	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
9	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
10	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	TOR	Torrington	Torrington Municipal Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
11	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
12	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
13	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
14	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field

2020 House District	Airport ID	City	Airport Name
	LAR	Laramie	Laramie Regional Airport
	DGW	Douglas	Douglas - Converse County Airport
15	LAR	Laramie	Laramie Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	RWL	Rawlins	Rawlins Municipal Airport - Harvey Field
16	JAC	Jackson	Jackson Hole Airport
17	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
18	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	AFO	Afton	Afton - Lincoln County Municipal Airport
	EVW	Evanston	Evanston - Uinta County Airport - Burns Field
	FBR	Fort Bridger	Fort Bridger Airport
	EMM	Kemmerer	Kemmerer Municipal Airport
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	EVW	Evanston	Evanston - Uinta County Airport - Burns Field
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	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	PNA	Pinedale	Pinedale - Ralph Wenz Field
	BPI	Big Piney	Big Piney - Miley Memorial Field
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	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	AFO	Afton	Afton - Lincoln County Municipal Airport
	EMM	Kemmerer	Kemmerer Municipal Airport
22	JAC	Jackson	Jackson Hole Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	AFO	Afton	Afton - Lincoln County Municipal Airport
	PNA	Pinedale	Pinedale - Ralph Wenz Field
	BPI	Big Piney	Big Piney - Miley Memorial Field
23	COD	Cody	Cody - Yellowstone Regional Airport
	JAC	Jackson	Jackson Hole Airport
24	COD	Cody	Cody - Yellowstone Regional Airport
	JAC	Jackson	Jackson Hole Airport
25	COD	Cody	Cody - Yellowstone Regional Airport
	POY	Powell	Powell Municipal Airport
26	COD	Cody	Cody - Yellowstone Regional Airport
	SHR	Sheridan	Sheridan County Airport
	GEY	Greybull	Greybull - South Big Horn County Airport
	WRL	Worland	Worland Municipal Airport
	POY	Powell	Powell Municipal Airport
	U68	Cowley	Cowley - North Big Horn County Airport
27	COD	Cody	Cody - Yellowstone Regional Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	GEY	Greybull	Greybull - South Big Horn County Airport
	WRL	Worland	Worland Municipal Airport

2020 House District	Airport ID	City	Airport Name
	HSG	Thermopolis	Thermopolis - Hot Springs County Airport
28	CPR	Casper	Casper - Natrona County International Airport
	COD	Cody	Cody - Yellowstone Regional Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	GEY	Greybull	Greybull - South Big Horn County Airport
	WRL	Worland	Worland Municipal Airport
	HSG	Thermopolis	Thermopolis - Hot Springs County Airport
29	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
30	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
31	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
33	CPR	Casper	Casper - Natrona County International Airport
	JAC	Jackson	Jackson Hole Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	LND	Lander	Lander - Hunt Field
	DUB	Dubois	Dubois Municipal Airport
34	CPR	Casper	Casper - Natrona County International Airport
	JAC	Jackson	Jackson Hole Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	LND	Lander	Lander - Hunt Field
	DUB	Dubois	Dubois Municipal Airport
35	CPR	Casper	Casper - Natrona County International Airport
36	CPR	Casper	Casper - Natrona County International Airport
37	CPR	Casper	Casper - Natrona County International Airport
38	CPR	Casper	Casper - Natrona County International Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
39	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
40	CPR	Casper	Casper - Natrona County International Airport
	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
41	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
42	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
43	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport

2020 House District	Airport ID	City	Airport Name
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
44	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
	82V	Pine Bluffs	Pine Bluffs Municipal Airport
45	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
46	CYS	Cheyenne	Cheyenne Regional Airport - Jerry Olsen Field
	LAR	Laramie	Laramie Regional Airport
47	CPR	Casper	Casper - Natrona County International Airport
	LAR	Laramie	Laramie Regional Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	RWL	Rawlins	Rawlins Municipal Airport - Harvey Field
	SAA	Saratoga	Saratoga - Shively Field
	DWX	Dixon	Dixon Airport
48	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
49	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport
	EVW	Evanston	Evanston - Uinta County Airport - Burns Field
50	COD	Cody	Cody - Yellowstone Regional Airport
	POY	Powell	Powell Municipal Airport
51	COD	Cody	Cody - Yellowstone Regional Airport
	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
	BYG	Buffalo	Buffalo - Johnson County Airport
52	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
53	GCC	Gillette	Gillette - Northeast Wyoming Regional Airport
	SHR	Sheridan	Sheridan County Airport
54	CPR	Casper	Casper - Natrona County International Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
	LND	Lander	Lander - Hunt Field
55	CPR	Casper	Casper - Natrona County International Airport
	RIW	Riverton	Riverton - Central Wyoming Regional Airport
56	CPR	Casper	Casper - Natrona County International Airport
57	CPR	Casper	Casper - Natrona County International Airport
58	CPR	Casper	Casper - Natrona County International Airport
	SHR	Sheridan	Sheridan County Airport
59	CPR	Casper	Casper - Natrona County International Airport
60	RKS	Rock Springs	Rock Springs - Southwest Wyoming Regional Airport

Table 12-3: Total Annual Economic Impact for All Airports in Each Senate District

Senate District	Impacts	Total Employment	Total Payroll	Total Spending	Total Economic Impact	Total Taxes
1	Annual Impacts All Assigned Airports	698	$26,221,600	$59,098,400	$85,320,000	$3,208,700
	Annual Impacts From Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
2	Annual Impacts All Assigned Airports	3,857	$141,099,900	$256,552,700	$397,652,600	$9,365,410
	Annual Impacts From Commercial Airline Functions	*1,209*	*$40,786,900*	*$92,219,000*	*$133,005,900*	*$5,536,650*
3	Annual Impacts All Assigned Airports	3,919	$142,416,700	$254,912,400	$397,329,100	$9,264,140
	Annual Impacts From Commercial Airline Functions	*1,218*	*$41,241,100*	*$89,454,800*	*$130,695,900*	*$5,363,340*
4	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
5	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
6	Annual Impacts All Assigned Airports	2,620	$93,267,200	$154,184,200	$247,451,400	$3,852,380
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
7	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
8	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
9	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
10	Annual Impacts All Assigned Airports	3,795	$138,366,900	$249,846,800	$388,213,700	$9,154,060
	Annual Impacts from Commercial Airline Functions	*1,209*	*$40,786,900*	*$92,219,000*	*$133,005,900*	*$5,536,650*
11	Annual Impacts All Assigned Airports	2,223	$84,153,500	$178,607,900	$262,761,400	$9,885,530
	Annual Impacts from Commercial Airline Functions	*1,314*	*$44,455,700*	*$95,275,700*	*$139,731,400*	*$5,752,530*
12	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
13	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
14	Annual Impacts All Assigned Airports	16,285	$733,918,400	$684,041,400	$1,417,959,800	$70,835,350
	Annual Impacts from Commercial Airline Functions	*15,106*	*$677,833,300*	*$612,584,700*	*$1,290,418,000*	*$65,981,020*
15	Annual Impacts All Assigned Airports	359	$12,458,400	$28,487,000	$40,945,400	$1,532,310
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*

Senate District	Impacts	Total Employment	Total Payroll	Total Spending	Total Economic Impact	Total Taxes
16	Annual Impacts All Assigned Airports	16,075	$725,383,000	$667,147,600	$1,392,530,600	$70,034,780
	Annual Impacts from Commercial Airline Functions	*15,002*	*$674,012,300*	*$604,459,600*	*$1,278,471,900*	*$65,567,310*
17	Annual Impacts All Assigned Airports	16,395	$734,196,300	$682,067,800	$1,416,264,100	$70,929,340
	Annual Impacts from Commercial Airline Functions	*15,324*	*$683,223,000*	*$621,089,000*	*$1,304,312,000*	*$66,533,210*
18	Annual Impacts All Assigned Airports	706	$22,678,700	$45,372,500	$68,051,200	$2,463,210
	Annual Impacts from Commercial Airline Functions	*505*	*$15,318,000*	*$32,843,600*	*$48,161,600*	*$1,841,640*
19	Annual Impacts All Assigned Airports	1,084	$38,536,800	$82,747,800	$121,284,600	$4,415,390
	Annual Impacts from Commercial Airline Functions	*648*	*$20,918,800*	*$42,833,700*	*$63,752,500*	*$2,422,550*
20	Annual Impacts All Assigned Airports	2,520	$95,534,400	$202,715,500	$298,249,900	$10,823,170
	Annual Impacts from Commercial Airline Functions	*1,584*	*$53,177,300*	*$106,724,400*	*$159,901,700*	*$6,340,010*
21	Annual Impacts All Assigned Airports	1,381	$48,040,800	$103,154,000	$151,194,800	$5,638,600
	Annual Impacts from Commercial Airline Functions	*852*	*$27,462,900*	*$55,240,300*	*$82,703,200*	*$3,208,570*
22	Annual Impacts All Assigned Airports	1,898	$72,806,000	$158,553,200	$231,359,200	$8,677,920
	Annual Impacts from Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
23	Annual Impacts All Assigned Airports	1,934	$74,095,300	$162,517,200	$236,612,500	$8,841,850
	Annual Impacts from Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
24	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
25	Annual Impacts All Assigned Airports	16,160	$728,981,900	$671,439,000	$1,400,420,900	$70,322,090
	Annual Impacts from Commercial Airline Functions	*15,106*	*$677,833,300*	*$612,584,700*	*$1,290,418,000*	*$65,981,020*
26	Annual Impacts All Assigned Airports	17,363	$775,615,600	$770,684,300	$1,546,299,900	$75,775,100
	Annual Impacts from Commercial Airline Functions	*15,938*	*$706,270,800*	*$668,350,300*	*$1,374,621,100*	*$69,484,770*
27	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
28	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
29	Annual Impacts All Assigned Airports	1203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
30	Annual Impacts All Assigned Airports	1,718	$68,008,100	$147,436,100	$215,444,200	$7,951,610
	Annual Impacts from Commercial Airline Functions	*1,079*	*$37,859,300*	*$73,880,800*	*$111,740,100*	*$4,498,370*

Table 12-4: Total Annual Economic Impact for All Airports in Each House District

House District	Impacts	Total Employment	Total Payroll	Total Spending	Total Economic Impact	Total Taxes
1	Annual Impacts All Assigned Airports	698	$26,221,600	$59,098,400	$85,320,000	$3,208,700
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
2	Annual Impacts All Assigned Airports	394	$13,814,300	$29,098,700	$42,913,000	$1,540,910
	Annual Impacts from Commercial Airline Functions	*204*	*$6,544,100*	*$12,406,600*	*$18,950,700*	*$786,020*
3	Annual Impacts All Assigned Airports	1,918	$73,523,500	$160,817,800	$234,341,300	$8,766,250
	Annual Impacts from Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
4	Annual Impacts All Assigned Airports	2,654	$94,466,200	$157,307,400	$251,773,600	$3,912,400
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
5	Annual Impacts All Assigned Airports	2,338	$82,751,700	$128,425,300	$211,177,000	$2,345,000
	Annual Impacts from Commercial Airline Functions	*182*	*$6,259,500*	*$21,282,600*	*$27,542,100*	*$1,073,570*
6	Annual Impacts All Assigned Airports	1,519	$58,557,600	$127,582,200	$186,139,800	$6,991,070
	Annual Impacts from Commercial Airline Functions	*1,027*	*$34,527,400*	*$70,936,400*	*$105,463,800*	*$4,463,080*
7	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
8	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
9	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
10	Annual Impacts All Assigned Airports	2,620	$93,267,200	$154,184,200	$247,451,400	$3,852,380
	Annual Impacts from Commercial Airline Functions	377	$12,349,400	$36,453,400	$48,802,800	$2,032,900
11	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
12	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
13	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
14	Annual Impacts All Assigned Airports	2,612	$92,450,700	$152,866,100	$245,316,800	$3,789,380
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
15	Annual Impacts All Assigned Airports	642	$23,674,200	$53,574,800	$77,249,000	$2,941,310
	Annual Impacts from Commercial Airline Functions	*378*	*$12,197,200*	*$31,385,000*	*$43,582,200*	*$1,835,070*

House District	Impacts	Total Employment	Total Payroll	Total Spending	Total Economic Impact	Total Taxes
16	Annual Impacts All Assigned Airports	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Annual Impacts from Commercial Airline Functions	*14,819*	*$667,905,000*	*$588,245,400*	*$1,256,150,400*	*$64,691,570*
17	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
18	Annual Impacts All Assigned Airports	461	$17,670,200	$40,784,700	$58,454,900	$2,017,460
	Annual Impacts from Commercial Airline Functions	183	$6,107,300	$16,214,200	$22,321,500	$875,740
19	Annual Impacts All Assigned Airports	359	$12,458,400	$28,487,000	$40,945,400	$1,532,310
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
20	Annual Impacts All Assigned Airports	16,148	$727,611,400	$668,744,900	$1,396,356,300	$70,210,640
	Annual Impacts from Commercial Airline Functions	*15,106*	*$677,833,300*	*$612,584,700*	*$1,290,418,000*	*$65,981,020*
21	Annual Impacts All Assigned Airports	16,033	$723,684,200	$663,519,000	$1,387,203,200	$69,905,280
	Annual Impacts from Commercial Airline Functions	*15,002*	*$674,012,300*	*$604,459,600*	*$1,278,471,900*	*$65,567,310*
22	Annual Impacts All Assigned Airports	16,067	$725,106,100	$666,432,100	$1,391,538,200	$70,005,660
	Annual Impacts from Commercial Airline Functions	*15,002*	*$674,012,300*	*$604,459,600*	*$1,278,471,900*	*$65,567,310*
23	Annual Impacts All Assigned Airports	16,293	$728,977,700	$669,579,200	$1,398,556,900	$70,441,070
	Annual Impacts from Commercial Airline Functions	*15,324*	*$683,223,000*	*$621,089,000*	*$1,304,312,000*	*$66,533,210*
24	Annual Impacts All Assigned Airports	16,293	$728,977,700	$669,579,200	$1,398,556,900	$70,441,070
	Annual Impacts from Commercial Airline Functions	*15,324*	*$683,223,000*	*$621,089,000*	*$1,304,312,000*	*$66,533,210*
25	Annual Impacts All Assigned Airports	706	$22,678,700	$45,372,500	$68,051,200	$2,463,210
	Annual Impacts from Commercial Airline Functions	*505*	*$15,318,000*	*$32,843,600*	*$48,161,600*	*$1,841,640*
26	Annual Impacts All Assigned Airports	1,130	$40,926,700	$88,569,000	$129,495,700	$4,656,960
	Annual Impacts from Commercial Airline Functions	*648*	*$20,918,800*	*$42,833,700*	*$63,752,500*	*$2,422,550*
27	Annual Impacts All Assigned Airports	1,297	$48,090,500	$101,943,800	$150,034,300	$5,320,640
	Annual Impacts from Commercial Airline Functions	*752*	*$24,739,800*	*$50,958,800*	*$75,698,600*	*$2,836,260*
28	Annual Impacts All Assigned Airports	2,160	$80,790,000	$166,893,300	$247,683,300	$8,936,060
	Annual Impacts from Commercial Airline Functions	*1,441*	*$47,576,500*	*$96,734,300*	*$144,310,800*	*$5,759,100*
29	Annual Impacts All Assigned Airports	695	$26,172,300	$59,307,900	$85,480,200	$3,224,910
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
30	Annual Impacts All Assigned Airports	695	$26,172,300	$59,307,900	$85,480,200	$3,224,910
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
31	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*

House District	Impacts	Total Employment	Total Payroll	Total Spending	Total Economic Impact	Total Taxes
32	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	347	$12,144,900	$22,396,700	$34,541,600	$1,366,930
33	Annual Impacts All Assigned Airports	17,363	$775,615,600	$770,684,300	$1,546,299,900	$75,775,100
	Annual Impacts from Commercial Airline Functions	*15,938*	*$706,270,800*	*$668,350,300*	*$1,374,621,100*	*$69,484,770*
34	Annual Impacts All Assigned Airports	17,363	$775,615,600	$770,684,300	$1,546,299,900	$75,775,100
	Annual Impacts from Commercial Airline Functions	15,938	$706,270,800	$668,350,300	$1,374,621,100	$69,484,770
35	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
36	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	832	$28,437,500	$55,765,600	$84,203,100	$3,503,750
37	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
38	Annual Impacts All Assigned Airports	1,718	$68,008,100	$147,436,100	$215,444,200	$7,951,610
	Annual Impacts from Commercial Airline Functions	*1,079*	*$37,859,300*	*$73,880,800*	*$111,740,100*	*$4,498,370*
39	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
40	Annual Impacts All Assigned Airports	1,898	$72,806,000	$158,553,200	$231,359,200	$8,677,920
	Annual Impacts from Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
41	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
42	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
43	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
44	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
45	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
46	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
47	Annual Impacts All Assigned Airports	2,223	$84,153,500	$178,607,900	$262,761,400	$9,885,530
	Annual Impacts from Commercial Airline Functions	*1,314*	*$44,455,700*	*$95,275,700*	*$139,731,400*	*$5,752,530*

House District	Impacts	Total Employment	Total Payroll	Total Spending	Total Economic Impact	Total Taxes
48	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
49	Annual Impacts All Assigned Airports	354	$12,306,300	$27,958,600	$40,264,900	$1,514,630
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
50	Annual Impacts All Assigned Airports	706	$22,678,700	$45,372,500	$68,051,200	$2,463,210
	Annual Impacts from Commercial Airline Functions	*505*	*$15,318,000*	*$32,843,600*	*$48,161,600*	*$1,841,640*
51	Annual Impacts All Assigned Airports	1,381	$48,040,800	$103,154,000	$151,194,800	$5,638,600
	Annual Impacts from Commercial Airline Functions	*852*	*$27,462,900*	*$55,240,300*	*$82,703,200*	*$3,208,570*
52	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
53	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
54	Annual Impacts All Assigned Airports	1,424	$56,859,500	$118,556,600	$175,416,100	$6,322,730
	Annual Impacts from Commercial Airline Functions	*936*	*$32,258,500*	*$63,890,700*	*$96,149,200*	*$3,917,460*
55	Annual Impacts All Assigned Airports	1,378	$54,073,900	$113,140,300	$167,214,200	$6,114,020
	Annual Impacts from Commercial Airline Functions	*936*	*$32,258,500*	*$63,890,700*	*$96,149,200*	*$3,917,460*
56	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
57	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
58	Annual Impacts All Assigned Airports	1,543	$60,567,900	$133,541,100	$194,109,000	$7,290,600
	Annual Impacts from Commercial Airline Functions	*975*	*$34,038,300*	*$65,755,700*	*$99,794,000*	*$4,084,660*
59	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
60	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*

13. Economic Impact Calculator

Prior sections of this report identified statewide and airport-specific economic impacts measured in WYDOT's 2020 Aviation Economic Impact Study. Economic impact studies, such as this WYDOT study, are a "snapshot in time;" they reflect conditions and activity at study airports when study data collection is completed. Annual economic impacts reported in this study can, for the most part, be expected to be realized in subsequent years, as long as airport conditions and activity remain stable. Data included in WYDOT's Aviation Economic Impact Study reflect conditions that characterized the study airports in early 2020. All impacts reported in the study and included in WYDOT's economic impact calculator are based on pre-COVID conditions. Aviation is a dynamic and ever-changing industry. Therefore, the economic impacts presented in this report have the propensity to change. If conditions do change, WYDOT has the ability to generate an updated economic impact estimate for any of the 34 study airports.

As part of the state's economic impact study, a tool was created that enables WYDOT to update baseline economic inputs for an individual study airport, as these inputs are documented in the state study. The tool is an economic impact calculator that can be used by WYDOT to generate updated economic impact results for any of the study airports. This section provides an overview of the calculator.

The economic impact calculator should be used to update an airport's economic impact, as it was estimated in the state study, only when changes in conditions at an airport warrant an update. Small changes in any of the baseline inputs for any of the economic impact categories may not warrant using the calculator to produce an updated economic impact estimate. The calculator can be used to estimate increased or decreased economic impacts.

Each airport's annual economic impact, as reported in the state study, is based, as applicable, on impacts associated with airport management, aviation-related airport business tenants, average annual investment to implement capital improvement projects, expenditures by visitors who arrive on general aviation aircraft, and expenditures by visitors who arrive on scheduled commercial airline flights at the nine Wyoming commercial airports. The calculator enables WYDOT to produce an updated economic impact based on changes in direct inputs in any or all of these categories. It is worth noting that updates to impacts from commercial airline visitor expenditures are limited to those nine Wyoming airports that had scheduled commercial airline flights at the time data gathering for the state study was completed (early 2020).

Airport Management: Changes to employment, payroll, or annual spending to support day-to-day airport operations can be used to revise an airport's economic impact in this category. As appropriate, all three impacts (employment, payroll, and spending) need to be updated separately. Full-time jobs are needed to update the impacts in this category. If the airport experiences changes in direct airport management employment, payroll, and/or spending (increases or decreases), the calculator produces a revised economic impact estimate. Changes in annual direct payroll associated with changes in employment need to be entered separately to produce a revised economic impact estimate; changing full-time employment in this category in the calculator does not result in an automatic update to either direct payroll or spending impacts. Changes in direct airport operating expenses (spending) must be entered separately, as appropriate, to produce a revised economic impact. When WYDOT enters updated direct impacts, the calculator estimates additional indirect/induced impacts, as applicable, for the airport management category. In addition, updated state and local sales tax revenues will be automatically generated for this category, assuming there are changes to payroll or spending. Tax revenues will either increase or decrease based on changes for airport management payroll and/or spending.

Business Tenants: The tool provides information for each airport's current (March 2020) business tenants, as they were identified in the state study. Data in the calculator includes the tenant's full-time employment and the primary line of service the tenant provides. Data on each tenant's payroll and spending are also embedded in the calculator. Changes to business tenant impacts can be made by increasing or decreasing full-time employment estimates for existing tenants. If the airport loses a business tenant, a revised economic impact estimate can be generated by changing full-time employment for any existing business tenant to "0". The tool can also estimate changes in economic impact resulting from the addition of one or more new tenants.

The calculator can also estimate the impacts from a "potential" tenant that might be attracted to an airport. To use this function, the airport needs to provide WYDOT with the new or potential business tenant's primary line of business, along with an estimate of their full-time employment. When estimating impacts from a "potential" business tenant, it is best to have all other sections of the calculator cleared and set on original direct impacts; this makes it easier to "isolate" just the impacts that could be associated with a "potential" tenant at an airport.

When the direct employment for existing, new, or potential business tenants is entered, the calculator estimates appropriate payroll and spending along with indirect/induced impacts. Updates to state and local sales tax revenues associated with businesses tenants are also generated by the calculator to reflect changes made in this impact category.

Average Annual Capital Investment: The state study considered a five-year history of investment (local, state, federal, and private/tenant) to establish an estimate of average annual capital investment; this average was used to estimate annual economic impacts in this category. Impacts reflect investments made through the end of 2019. WYDOT can update impacts in this category by entering additional investment (spending for projects that took place after 2019), plus the number of years over which the additional investment took place. Updating capital spending will also update state and local sales tax revenues in this category.

The calculator also has the ability to estimate the "potential" economic impact that could result from a large capital project, for instance, a new runway or a major runway extension. Estimating potential impacts in this category requires anticipated/planned direct investment; the calculator estimates all indirect/induced impacts, along with employment and payroll supported by any potential capital investment and associated potential state and local sale tax revenues.

General Aviation Visitor Expenditures: Estimates of annual general aviation visitors were developed specifically to match the circumstances of each individual study airport. The process first identifies average visiting/transient general aviation aircraft arrivals per week, the typical fleet mix for these aircraft, and then the average number of visitors per plane type. Study surveys identify specific estimates of average expenditures per visitor per trip, by airport. Updates in this category can be made if the number of average weekly arriving visiting general aviation aircraft arrivals increase or decrease.

Once a change in weekly visiting aircraft arrivals is entered, the calculator estimates all indirect/induced impacts, along with employment and payroll supported by general aviation visitor expenditures. The calculator will also estimate revised state and local sales tax revenues if general aviation visitor estimates either increase or decrease.

Commercial Visitor Expenditures: Nine of the study airports have impacts in this category. Underlying information in the calculator stores each airport's percent of visitors versus total annual enplanements, and the airport's average expenditures per visitor per trip, as derived from the study's surveys. Changes in annual commercial enplanements are needed to update impacts in this category. Once a different annual enplanement level is entered, the calculator estimates all indirect/induced impacts, along with employment and payroll supported by commercial visitor expenditures. Updates to total annual enplanements will also

update state and local sales tax revenues that are associated with commercial visitor expenditures and the spending employees who are supported by these expenditures.

When a study airport experiences measurable changes in conditions (direct impacts in any of the five categories) that existed at the time the WYDOT statewide study was conducted, the airport can contact the Aeronautics Division to collaboratively determine how changing conditions may have impacted the airport's economic impact as presented in this study. All direct impacts that drive the calculator are based on airport conditions that existed prior to March 2020 and the COVID pandemic.

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14. Summary and Conclusions

WYDOT's 2020 Aviation Economic Impact Study includes an analysis that estimates total statewide annual economic impacts for 34 study airports, nine commercial service airports and 25 general aviation airports. All study airports have paved runways. As applicable, economic impacts are estimated for the following categories: airport management, business tenants, average annual capital investment, general aviation visitor expenditures, and commercial visitor expenditures. For each category, employment, annual payroll, annual spending, and annual economic activity are estimated. For this analysis, annual economic activity is the sum of payroll and spending. These two measurements combined represent the economic cycle that starts at the airports and flows into other sectors of local and state economies.

As a subset of the total annual economic impacts for the nine commercial airports, impacts associated exclusively with each airport's commercial airline function were also isolated and reported. In addition, considering only direct impacts, state and local tax revenues that stem from airport-supported payroll and spending are also estimated. **Table 14-1** summarizes statewide annual economic impacts identified for all airports. Impacts presented in this table reflect direct impacts, as well as indirect/induced impacts that were identified using the IMPLAN model.

Total annual statewide impacts are presented in **Table 14-1.**

Table 14-1: Total Annual Economic Impacts from Study Airports

Impact Category	Employment	Payroll	Spending	Economic Activity
Airport Management	435	$20.0 M	$90.7 M	$110.7 M
Business Tenants	3,628	$171.0 M	$316.5 M	$487.5 M
Average Annual Capital Investment	483	$22.4 M	$73.7 M	$96.1 M
General Aviation Visitor Expenditures	1,669	$57.9 M	$57.3 M	$115.2 M
Commercial Visitor Expenditures	15,759	$679.5 M	$543.8 M	$1.2 B
Total Statewide Impact	**21,974**	**$941.7 M**	**$1.1 B**	**$2.0 B**

Source: Jviation

As **Table 14-1** shows, when all study airports are considered, collectively, they support:

- 21,974 jobs
- $941.7 million in annual payroll
- $ 1.1 billion in annual spending
- $2.0 billion in annual economic activity

As part of the WYDOT study, analysis was completed to show the portion of the statewide economic impacts that are related exclusive to commercial airline functions at the nine commercial airports. The analysis shows that a considerable portion of the statewide impact, reported above, is in fact related to impacts associated with commercial airline functions at the nine commercial service airports. Statewide economic impacts related to commercial airline functions were identified in the WYDOT study as follows:

- 17,167 jobs
- $746.1 million in annual payroll
- $760.0 million in annual spending
- $1.5 billion in annual economic activity

In addition to the economic impacts reported above, the study airports also support state and local sales tax revenues. These tax revenues are supported by spending associated with airport management, business tenants, capital projects, and both categories of visitors. In addition, all jobs that are airport-supported have annual payroll, and a portion of that payroll is spent annually on taxable items, contributing to more state and local sales tax revenues. As measured in the WYDOT study, total statewide annual state and local sales tax revenues are as shown in **Table 14-2**.

Table 14-2: Total Statewide Annual Tax Revenues from Study Airports

Tax Revenue Category	Annual State and Local Sales Tax Revenue
Spending from Airport Management	$2.7 M
Spending from Business Tenants	$8.3 M
Spending from Capital Investment	$2.6 M
Spending from Visitors	$64.7 M
Spending from Employees	$9.9 M
Total Statewide Tax Revenues All Categories	**$87.7 M**

Source: Jviation

Since the economic impacts from the study airports were last reported in 2013, total statewide economic impacts have increased, as have the estimated annual tax revenues. **Table 14-3** reflects the increased economic impacts from the study airports.

Table 14-3: Increases in Total Statewide Economic Impacts Supported by Study Airports

	Employment	Payroll	Economic Activity	Tax Revenues	Commercial Airline Functions
2013	12,268	$526.4 M	$1.4 B	$55.0 M	$1.0 B
2020	21,974	$941.7 M	$2.0 B	$87.7 M	$1.5 B

Source: Jviation

The state study identified 21,974 direct, indirect, and induced jobs that that the study airports support. In addition to these jobs, the airports support another 5,600 jobs statewide that in some way depend on the study airports. This represents about 9.5% of all employment in Wyoming. The $2.0 billion in economic activity reported by all study airports represents about 5% of Wyoming's Gross State Product.

As this study shows, airports are important economic generators and contribute to the success of many sectors of Wyoming's economy. In addition to this Technical Report, several other reports and products have been produced in association with this study. These include:

- Executive Summary Statewide Economic Impacts
- Executive Summary Economic Impacts of Commercial Airline Functions
- Individual Airport Reports (two versions for all study airports)
- Summary Reports for Economic Impacts by State Legislative District
- Summary Report on UAS Economic Impacts
- Project Fact Sheets
- Project Videos

Access to these additional products is available by contacting the Aeronautics Division.

APPENDIX A – ECONOMIC IMPACTS FROM LOCAL MODELS

A. Estimates of Indirect/Induced Annual Economic Impacts for Study Airports – Local Models

Direct, Indirect/Induced, and Total Annual Economic Impacts from Airport Management at Commercial Service Study Airports – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
CPR	Casper - Natrona County International Airport	28	28	56	$1,016,900	$617,900	$1,634,800	$3,260,300	$2,429,900	$5,690,200	$4,277,200	$3,047,800	$7,325,000
CYS	Cheyenne Regional Airport - Jerry Olson Field	25	24	49	$869,900	$508,900	$1,378,800	$6,548,700	$5,511,900	$12,060,600	$7,418,600	$6,020,800	$13,439,400
COD	Cody - Yellowstone Regional Airport	13	13	26	$533,900	$320,800	$854,700	$321,800	$261,000	$582,800	$855,700	$581,800	$1,437,500
GCC	Gillette - Northeast Wyoming Regional Airport	9	8	17	$630,300	$329,200	$959,500	$725,000	$341,000	$1,066,000	$1,355,300	$670,200	$2,025,500
JAC	Jackson Hole Airport	90	91	181	$5,830,000	$3,379,400	$9,209,400	$27,479,700	$19,870,400	$47,350,100	$33,309,700	$23,249,800	$56,559,500
LAR	Laramie Regional Airport	7	6	13	$423,600	$191,200	$614,800	$1,202,600	$737,400	$1,940,000	$1,626,200	$928,600	$2,554,800
RIW	Riverton - Central Wyoming Regional Airport	6	6	12	$546,700	$293,900	$840,600	$276,200	$189,200	$465,400	$822,900	$483,100	$1,306,000
RKS	Rock Springs - Southwest Wyoming Regional Airport	9	6	15	$746,600	$284,700	$1,031,300	$2,525,000	$1,189,600	$3,714,600	$3,271,600	$1,474,300	$4,745,900
SHR	Sheridan County Airport	8	8	16	$470,000	$278,400	$748,400	$3,307,000	$2,101,300	$5,408,300	$3,777,000	$2,379,700	$6,156,700
	Commercial Service Airports Total	**195**	**190**	**385**	**$11,067,900**	**$6,204,400**	**$17,272,300**	**$45,646,300**	**$32,631,700**	**$78,278,000**	**$56,714,200**	**$38,836,100**	**$95,550,300**

Source: Airport Managers and IMPLAN

Direct, Indirect/Induced, and Total Economic Impact from Airport Business Tenants at Commercial Service Study Airports – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
CPR	Casper - Natrona County International Airport	206	113	319	$13,064,000	$5,401,700	$18,465,700	$32,035,800	$12,171,900	$44,207,700	$45,099,800	$17,573,600	$62,673,400
CYS	Cheyenne Regional Airport - Jerry Olson Field	1,040	1,007	2,047	$43,904,900	$25,339,900	$69,244,800	$54,133,900	$43,354,200	$97,488,100	$98,038,800	$68,694,100	$166,732,900
COD	Cody - Yellowstone Regional Airport	88	40	128	$3,813,200	$1,560,400	$5,373,600	$10,750,000	$3,518,400	$14,268,400	$14,563,200	$5,078,800	$19,642,000
GCC	Gillette - Northeast Wyoming Regional Airport	44	24	68	$2,097,000	$1,341,800	$3,438,800	$5,198,400	$2,032,900	$7,231,300	$7,295,400	$3,374,700	$10,670,100
JAC	Jackson Hole Airport	270	93	363	$17,586,300	$9,814,600	$27,400,900	$56,148,200	$17,927,700	$74,075,900	$73,734,500	$27,742,300	$101,476,800
LAR	Laramie Regional Airport	41	36	77	$2,729,700	$1,169,200	$3,898,900	$6,170,200	$3,354,400	$9,524,600	$8,899,900	$4,523,600	$13,423,500
RIW	Riverton - Central Wyoming Regional Airport	41	16	57	$2,117,600	$1,417,900	$3,535,500	$3,977,600	$1,254,500	$5,232,100	$6,095,200	$2,672,400	$8,767,600
RKS	Rock Springs - Southwest Wyoming Regional Airport	35	21	56	$1,819,300	$527,400	$2,346,700	$3,187,000	$1,140,900	$4,327,900	$5,006,300	$1,668,300	$6,674,600
SHR	Sheridan County Airport	93	52	145	$4,646,700	$1,971,200	$6,617,900	$12,833,300	$3,787,600	$16,620,900	$17,480,000	$5,758,800	$23,238,800
	Commercial Service Airports Total	**1,858**	**1,402**	**3,260**	**$91,778,700**	**$48,544,100**	**$140,322,800**	**$184,434,400**	**$88,542,500**	**$272,976,900**	**$276,213,100**	**$137,086,600**	**$413,299,700**

Source: Airport Managers, Airport Tenants, and IMPLAN

Direct, Indirect/Induced, And Total Annual Economic Impact from Airport Management and Airport Business Tenants for General Aviation Study Airports – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	57	25	82	$2,707,400	$1,129,400	$3,836,800	$8,209,300	$2,141,900	$10,351,200	$10,916,700	$3,271,300	$14,188,000
BYG	Buffalo - Johnson County Airport	4	1	5	$146,200	$55,500	$201,700	$747,000	$264,900	$1,011,900	$893,200	$320,400	$1,213,600
DGW	Douglas - Converse County Airport	2	1	3	$90,000	$18,000	$108,000	$398,700	$98,500	$497,200	$488,700	$116,500	$605,200
EVW	Evanston-Uinta County Airport - Burns Field	5	3	8	$192,600	$90,200	$282,800	$714,500	$225,400	$939,900	$907,100	$315,600	$1,222,700
GEY	Greybull - South Big Horn County Airport	15	7	22	$857,000	$128,800	$985,800	$922,500	$320,000	$1,242,500	$1,779,500	$448,800	$2,228,300
LND	Lander - Hunt Field	21	4	25	$1,296,200	$931,400	$2,227,600	$2,557,800	$707,000	$3,264,800	$3,854,000	$1,638,400	$5,492,400
PNA	Pinedale - Ralph Wenz Field	8	4	12	$401,400	$99,300	$500,700	$855,000	$283,900	$1,138,900	$1,256,400	$383,200	$1,639,600
RWL	Rawlins Municipal Airport - Harvey Field	8	1	9	$460,500	$105,000	$565,500	$866,400	$194,100	$1,060,500	$1,326,900	$299,100	$1,626,000
SAA	Saratoga - Shively Field	6	1	7	$419,900	$95,800	$515,700	$1,367,300	$314,200	$1,681,500	$1,787,200	$410,000	$2,197,200
TOR	Torrington Municipal Airport	6	2	8	$319,100	$92,100	$411,200	$710,200	$198,700	$908,900	$1,029,300	$290,800	$1,320,100
WRL	Worland Municipal Airport	21	10	31	$1,198,000	$204,600	$1,402,600	$3,759,100	$364,700	$4,123,800	$4,957,100	$569,300	$5,526,400
	Business Airports Total	**153**	**59**	**212**	**$8,088,300**	**$2,950,100**	**$11,038,400**	**$21,107,800**	**$5,113,300**	**$26,221,100**	**$29,196,100**	**$8,063,400**	**$37,259,500**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	2	1	3	$71,000	$29,300	$100,300	$86,000	$45,800	$131,800	$157,000	$75,100	$232,100
DUB	Dubois Municipal Airport	1	<1	2	$54,100	$37,100	$91,200	$114,400	$45,200	$159,600	$168,500	$82,300	$250,800
FBR	Fort Bridger Airport	1	<1	2	$35,800	$20,300	$56,100	$107,100	$56,200	$163,300	$142,900	$76,500	$219,400
GUR	Guernsey - Camp Guernsey Army Airfield	12	9	21	$842,900	$249,700	$1,092,600	$1,052,900	$667,200	$1,720,100	$1,895,800	$916,900	$2,812,700
EMM	Kemmerer Municipal Airport	1	1	2	$52,600	$23,300	$75,900	$84,000	$61,500	$145,500	$136,600	$84,800	$221,400
ECS	Newcastle - Mondell Field	2	1	3	$109,800	$26,800	$136,600	$211,400	$58,100	$269,500	$321,200	$84,900	$406,100

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
82V	Pine Bluffs Municipal Airport	7	2	9	$394,400	$161,200	$555,600	$1,078,200	$382,100	$1,460,300	$1,472,600	$543,300	$2,015,900
POY	Powell Municipal Airport	9	4	13	$359,800	$161,600	$521,400	$652,600	$271,400	$924,000	$1,012,400	$433,000	$1,445,400
HSG	Thermopolis - Hot Springs County Airport	7	3	10	$278,500	$34,400	$312,900	$598,400	$81,900	$680,300	$876,900	$116,300	$993,200
EAN	Wheatland - Phifer Airfield	<1	<1	<1	$9,000	$2,600	$11,600	$44,600	$28,200	$72,800	$53,600	$30,800	$84,400
	Intermediate Airports Total	**42**	**23**	**65**	**$2,207,900**	**$746,300**	**$2,954,200**	**$4,029,600**	**$1,697,600**	**$5,727,200**	**$6,237,500**	**$2,443,900**	**$8,681,400**
Local Airports													
U68	Cowley - North Big Horn County Airport	1	<1	1	$51,100	$8,200	$59,300	$245,300	$93,400	$338,700	$296,400	$101,600	$398,000
DWX	Dixon Airport	2	<1	2	$208,400	$48,100	$256,500	$663,700	$155,200	$818,900	$872,100	$203,300	$1,075,400
W43	Hulett Municipal Airport	<1	<1	<1	$9,500	$2,800	$12,300	$38,400	$28,500	$66,900	$47,900	$31,300	$79,200
LSK	Lusk Municipal Airport	<1	<1	<1	$9,100	$2,600	$11,700	$19,400	$12,300	$31,700	$28,500	$14,900	$43,400
	Local Airports Total	**3**	**-**	**3**	**$278,100**	**$61,700**	**$339,800**	**$966,800**	**$289,400**	**$1,256,200**	**$1,244,900**	**$351,100**	**$1,596,000**
	General Aviation Airports Total	**198**	**82**	**280**	**$10,574,300**	**$3,758,100**	**$14,332,400**	**$26,104,200**	**$7,100,300**	**$33,204,500**	**$36,678,500**	**$10,858,400**	**$47,536,900**

Source: Airport Managers, Airport Tenants, and IMPLAN

Direct, Indirect/Induced, and Total Annual Economic Impact from Average Annual Capital Investment at Study Airports – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Commercial Service Airports													
CPR	Casper - Natrona County International Airport	41	27	68	$1,564,800	$738,200	$2,303,000	$6,900,400	$3,645,500	$10,545,900	$8,465,200	$4,383,700	$12,848,900
CYS	Cheyenne Regional Airport - Jerry Olson Field	25	16	41	$1,023,900	$538,000	$1,561,900	$4,089,100	$2,228,400	$6,317,500	$5,113,000	$2,766,400	$7,879,400
COD	Cody - Yellowstone Regional Airport	14	9	23	$536,800	$267,300	$804,100	$2,307,800	$1,056,700	$3,364,500	$2,844,600	$1,324,000	$4,168,600
GCC	Gillette - Northeast Wyoming Regional Airport	10	5	15	$386,900	$155,400	$542,300	$1,622,400	$712,000	$2,334,400	$2,009,300	$867,400	$2,876,700
JAC	Jackson Hole Airport	71	31	102	$4,507,000	$1,564,200	$6,071,200	$10,031,400	$3,303,200	$13,334,600	$14,538,400	$4,867,400	$19,405,800
LAR	Laramie Regional Airport	16	10	26	$637,700	$293,800	$931,500	$2,707,800	$1,186,300	$3,894,100	$3,345,500	$1,480,100	$4,825,600
RIW	Riverton - Central Wyoming Regional Airport	17	10	27	$626,700	$302,300	$929,000	$2,799,200	$1,405,600	$4,204,800	$3,425,900	$1,707,900	$5,133,800
RKS	Rock Springs - Southwest Wyoming Regional Airport	23	10	33	$856,800	$243,700	$1,100,500	$3,827,100	$1,438,400	$5,265,500	$4,683,900	$1,682,100	$6,366,000
SHR	Sheridan County Airport	10	7	17	$402,800	$166,200	$569,000	$1,710,300	$813,700	$2,524,000	$2,113,100	$979,900	$3,093,000
	Commercial Service Airports Total	**227**	**125**	**352**	**$10,543,400**	**$4,269,100**	**$14,812,500**	**$35,995,500**	**$15,789,800**	**$51,785,300**	**$46,538,900**	**$20,058,900**	**$66,597,800**
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	1	<1	1	$30,600	$17,300	$47,900	$128,400	$57,100	$185,500	$159,000	$74,400	$233,400
BYG	Buffalo - Johnson County Airport	3	1	4	$99,800	$28,700	$128,500	$440,000	$175,100	$615,100	$539,800	$203,800	$743,600
DGW	Douglas - Converse County Airport	5	2	7	$215,600	$45,500	$261,100	$882,000	$227,400	$1,109,400	$1,097,600	$272,900	$1,370,500
EVW	Evanston-Uinta County Airport - Burns Field	2	1	3	$81,200	$26,800	$108,000	$382,000	$162,600	$544,600	$463,200	$189,400	$652,600
GEY	Greybull - South Big Horn County Airport	3	1	4	$110,000	$28,600	$138,600	$532,100	$162,100	$694,200	$642,100	$190,700	$832,800
LND	Lander - Hunt Field	7	4	11	$261,000	$125,900	$386,900	$1,165,900	$585,400	$1,751,300	$1,426,900	$711,300	$2,138,200
PNA	Pinedale - Ralph Wenz Field	5	2	7	$202,600	$73,400	$276,000	$818,800	$295,500	$1,114,300	$1,021,400	$368,900	$1,390,300
RWL	Rawlins Municipal Airport - Harvey Field	2	1	3	$91,000	$22,600	$113,600	$391,300	$127,200	$518,500	$482,300	$149,800	$632,100
SAA	Saratoga - Shively Field	4	2	6	$169,400	$42,000	$211,400	$728,100	$236,600	$964,700	$897,500	$278,600	$1,176,100
TOR	Torrington Municipal Airport	2	1	3	$84,000	$29,500	$113,500	$406,400	$147,700	$554,100	$490,400	$177,200	$667,600
WRL	Worland Municipal Airport	1	<1	1	$33,300	$12,200	$45,500	$161,100	$68,500	$229,600	$194,400	$80,700	$275,100
	Business Airports Total	**35**	**15**	**50**	**$1,378,500**	**$452,500**	**$1,831,000**	**$6,036,100**	**$2,245,200**	**$8,281,300**	**$7,414,600**	**$2,697,700**	**$10,112,300**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	1	1	2	$42,800	$15,500	$58,300	$172,800	$62,400	$235,200	$215,600	$77,900	$293,500
DUB	Dubois Municipal Airport	3	1	4	$100,800	$48,600	$149,400	$450,300	$226,100	$676,400	$551,100	$274,700	$825,800
FBR	Fort Bridger Airport	1	1	2	$37,900	$12,500	$50,400	$178,400	$76,000	$254,400	$216,300	$88,500	$304,800
GUR	Guernsey - Camp Guernsey Army Airfield	-	-	-	$0	$0	$0	$0	$0	$0	$0	$0	$0
EMM	Kemmerer Municipal Airport	2	1	3	$68,800	$38,700	$107,500	$288,400	$128,400	$416,800	$357,200	$167,100	$524,300
ECS	Newcastle - Mondell Field	5	1	6	$166,000	$37,000	$203,000	$781,500	$257,300	$1,038,800	$947,500	$294,300	$1,241,800
82V	Pine Bluffs Municipal Airport	1	<1	1	$33,400	$17,600	$51,000	$133,400	$72,700	$206,100	$166,800	$90,300	$257,100
POY	Powell Municipal Airport	2	1	3	$62,800	$31,300	$94,100	$270,200	$123,700	$393,900	$333,000	$155,000	$488,000
HSG	Thermopolis - Hot Springs County Airport	3	1	4	$111,000	$31,300	$142,300	$529,700	$177,100	$706,800	$640,700	$208,400	$849,100
EAN	Wheatland - Phifer Airfield	9	4	13	$306,200	$182,000	$488,200	$1,441,300	$454,800	$1,896,100	$1,747,500	$636,800	$2,384,300
	Intermediate Airports Total	**27**	**11**	**38**	**$929,700**	**$414,500**	**$1,344,200**	**$4,246,000**	**$1,578,500**	**$5,824,500**	**$5,175,700**	**$1,993,000**	**$7,168,700**
Local Airports													

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
U68	Cowley - North Big Horn County Airport	1	1	2	$49,800	$12,900	$62,700	$240,700	$73,300	$314,000	$290,500	$86,200	$376,700
DWX	Dixon Airport	2	<1	2	$61,200	$15,200	$76,400	$263,300	$85,500	$348,800	$324,500	$100,700	$425,200
W43	Hulett Municipal Airport	<1	<1	<1	$300	$200	$500	$1,400	$500	$1,900	$1,700	$700	$2,400
LSK	Lusk Municipal Airport	1	<1	1	$36,400	$4,900	$41,300	$168,900	$36,900	$205,800	$205,300	$41,800	$247,100
	Local Airports Total	**4**	**1**	**5**	**$147,700**	**$33,200**	**$180,900**	**$674,300**	**$196,200**	**$870,500**	**$822,000**	**$229,400**	**$1,051,400**
	All Airports Total	**293**	**152**	**445**	**$12,999,300**	**$5,169,300**	**$18,168,600**	**$46,951,900**	**$19,809,700**	**$66,761,600**	**$59,951,200**	**$24,979,000**	**$84,930,200**

Source: WYDOT, FAA, Airport Managers, Airport Tenants Wyoming Business Council, and IMPLAN

Direct, Indirect/Induced, and Total Annual Economic Impact from General Aviation Visitor Expenditures at Study Airports – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Commercial Service Airports													
CPR	Casper - Natrona County International Airport	151	39	190	$3,727,700	$1,377,600	$5,105,300	$5,377,700	$2,725,600	$8,103,300	$9,105,400	$4,103,200	$13,208,600
CYS	Cheyenne Regional Airport - Jerry Olson Field	38	8	46	$1,011,900	$394,400	$1,406,300	$1,269,700	$576,300	$1,846,000	$2,281,600	$970,700	$3,252,300
COD	Cody - Yellowstone Regional Airport	101	21	122	$2,531,000	$632,100	$3,163,100	$3,525,100	$1,279,300	$4,804,400	$6,056,100	$1,911,400	$7,967,500
GCC	Gillette - Northeast Wyoming Regional Airport	64	15	79	$1,643,800	$610,100	$2,253,900	$2,210,800	$1,051,200	$3,262,000	$3,854,600	$1,661,300	$5,515,900
JAC	Jackson Hole Airport	536	117	653	$22,168,800	$5,536,700	$27,705,500	$10,119,400	$3,672,300	$13,791,700	$32,288,200	$9,209,000	$41,497,200
LAR	Laramie Regional Airport	38	11	49	$972,300	$365,700	$1,338,000	$1,330,800	$681,500	$2,012,300	$2,303,100	$1,047,200	$3,350,300
RIW	Riverton - Central Wyoming Regional Airport	16	5	21	$399,700	$155,000	$554,700	$586,800	$286,500	$873,300	$986,500	$441,500	$1,428,000
RKS	Rock Springs - Southwest Wyoming Regional Airport	76	16	92	$1,866,900	$537,300	$2,404,200	$2,741,200	$1,034,200	$3,775,400	$4,608,100	$1,571,500	$6,179,600
SHR	Sheridan County Airport	78	17	95	$1,985,400	$679,100	$2,664,500	$2,717,200	$1,376,000	$4,093,200	$4,702,600	$2,055,100	$6,757,700
	Commercial Service Airports Total	**1,098**	**249**	**1,347**	**$36,307,500**	**$10,288,000**	**$46,595,500**	**$29,878,700**	**$12,682,900**	**$42,561,600**	**$66,186,200**	**$22,970,900**	**$89,157,100**
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	4	1	5	$107,500	$37,300	$144,800	$144,600	$68,200	$212,800	$252,100	$105,500	$357,600
BYG	Buffalo - Johnson County Airport	5	1	6	$114,600	$40,100	$154,700	$165,300	$77,700	$243,000	$279,900	$117,800	$397,700
DGW	Douglas - Converse County Airport	5	1	6	$136,600	$46,700	$183,300	$177,500	$59,200	$236,700	$314,100	$105,900	$420,000
EVW	Evanston-Uinta County Airport - Burns Field	15	3	18	$339,300	$123,300	$462,600	$535,100	$238,800	$773,900	$874,400	$362,100	$1,236,500
GEY	Greybull - South Big Horn County Airport	1	1	2	$33,700	$13,000	$46,700	$55,000	$18,000	$73,000	$88,700	$31,000	$119,700
LND	Lander - Hunt Field	2	1	3	$49,700	$19,300	$69,000	$73,000	$35,700	$108,700	$122,700	$55,000	$177,700
PNA	Pinedale - Ralph Wenz Field	11	2	13	$282,400	$82,600	$365,000	$360,500	$134,200	$494,700	$642,900	$216,800	$859,700
RWL	Rawlins Municipal Airport - Harvey Field	4	1	5	$102,800	$18,300	$121,100	$143,200	$37,800	$181,000	$246,000	$56,100	$302,100
SAA	Saratoga - Shively Field	138	21	159	$3,483,900	$620,000	$4,103,900	$4,852,400	$1,281,200	$6,133,600	$8,336,300	$1,901,200	$10,237,500
TOR	Torrington Municipal Airport	3	<1	3	$60,700	$21,900	$82,600	$99,300	$41,000	$140,300	$160,000	$62,900	$222,900
WRL	Worland Municipal Airport	8	2	10	$177,800	$68,700	$246,500	$290,700	$125,900	$416,600	$468,500	$194,600	$663,100
	Business Airports Total	**196**	**34**	**230**	**$4,889,000**	**$1,091,200**	**$5,980,200**	**$6,896,600**	**$2,117,700**	**$9,014,300**	**$11,785,600**	**$3,208,900**	**$14,994,500**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	2	<1	2	$49,800	$14,500	$64,300	$63,500	$23,700	$87,200	$113,300	$38,200	$151,500
DUB	Dubois Municipal Airport	<1	1	1	$11,900	$4,600	$16,500	$17,400	$8,500	$25,900	$29,300	$13,100	$42,400
FBR	Fort Bridger Airport	1	<1	1	$19,500	$7,100	$26,600	$30,700	$13,800	$44,500	$50,200	$20,900	$71,100
GUR	Guernsey - Camp Guernsey Army Airfield	1	<1	1	$24,700	$7,400	$32,100	$39,000	$12,800	$51,800	$63,700	$20,200	$83,900
EMM	Kemmerer Municipal Airport	2	<1	2	$50,900	$17,700	$68,600	$68,500	$32,300	$100,800	$119,400	$50,000	$169,400
ECS	Newcastle - Mondell Field	3	<1	3	$68,300	$21,700	$90,000	$107,700	$31,400	$139,100	$176,000	$53,100	$229,100
82V	Pine Bluffs Municipal Airport	<1	<1	<1	$3,500	$1,400	$4,900	$4,400	$2,100	$6,500	$7,900	$3,500	$11,400
POY	Powell Municipal Airport	2	1	3	$58,400	$14,600	$73,000	$81,300	$29,500	$110,800	$139,700	$44,100	$183,800
HSG	Thermopolis - Hot Springs County Airport	2	<1	2	$35,100	$7,800	$42,900	$56,300	$18,800	$75,100	$91,400	$26,600	$118,000
EAN	Wheatland - Phifer Airfield	1	<1	1	$23,000	$6,800	$29,800	$36,200	$11,900	$48,100	$59,200	$18,700	$77,900
	Intermediate Airports Total	**14**	**2**	**16**	**$345,100**	**$103,600**	**$448,700**	**$505,000**	**$184,800**	**$689,800**	**$850,100**	**$288,400**	**$1,138,500**

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Local Airports													
U68	Cowley - North Big Horn County Airport	1	<1	1	$13,200	$5,100	$18,300	$21,500	$7,000	$28,500	$34,700	$12,100	$46,800
DWX	Dixon Airport	2	<1	2	$49,600	$8,800	$58,400	$69,000	$18,300	$87,300	$118,600	$27,100	$145,700
W43	Hulett Municipal Airport	1	1	2	$32,600	$7,200	$39,800	$46,200	$16,800	$63,000	$78,800	$24,000	$102,800
LSK	Lusk Municipal Airport	<1	<1	<1	$7,600	$2,600	$10,200	$11,800	$3,700	$15,500	$19,400	$6,300	$25,700
	Local Airports Total	**4**	**1**	**5**	**$103,000**	**$23,700**	**$126,700**	**$148,500**	**$45,800**	**$194,300**	**$251,500**	**$69,500**	**$321,000**
	All Airports Total	**1,312**	**286**	**1,598**	**$41,644,600**	**$11,506,500**	**$53,151,100**	**$37,428,800**	**$15,031,200**	**$52,460,000**	**$79,073,400**	**$26,537,700**	**$105,611,100**

Source: WYDOT, Airport Managers, Study Surveys, FAA NOP and 5010 Data, Aircraft Owners Pilots Association (AOPA), and IMPLAN

Direct, Indirect, and Total Annual Economic Impact from Commercial Visitor Expenditures at Commercial Service Airports – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
CPR	Casper - Natrona County International Airport	430	123	553	$10,594,100	$3,915,200	$14,509,300	$19,340,700	$9,408,900	$28,749,600	$29,934,800	$13,324,100	$43,258,900
CYS	Cheyenne Regional Airport - Jerry Olson Field	69	15	84	$1,840,700	$717,300	$2,558,000	$2,960,300	$1,343,600	$4,303,900	$4,801,000	$2,060,900	$6,861,900
COD	Cody - Yellowstone Regional Airport	289	61	350	$7,266,200	$1,814,700	$9,080,900	$12,846,200	$4,661,800	$17,508,000	$20,112,400	$6,476,500	$26,588,900
GCC	Gillette - Northeast Wyoming Regional Airport	116	29	145	$2,972,700	$1,155,300	$4,128,000	$5,091,100	$2,335,500	$7,426,600	$8,063,800	$3,490,800	$11,554,600
JAC	Jackson Hole Airport	10,951	2,660	13,611	$452,944,700	$119,628,700	$572,573,400	$310,193,700	$108,253,800	$418,447,500	$763,138,400	$227,882,500	$991,020,900
LAR	Laramie Regional Airport	98	30	128	$2,500,900	$940,400	$3,441,300	$4,351,500	$2,172,500	$6,524,000	$6,852,400	$3,112,900	$9,965,300
RIW	Riverton - Central Wyoming Regional Airport	37	8	45	$909,900	$353,100	$1,263,000	$1,688,200	$824,200	$2,512,400	$2,598,100	$1,177,300	$3,775,400
RKS	Rock Springs - Southwest Wyoming Regional Airport	87	19	106	$2,130,000	$650,800	$2,780,800	$3,952,000	$1,445,500	$5,397,500	$6,082,000	$2,096,300	$8,178,300
SHR	Sheridan County Airport	47	11	58	$1,195,700	$427,600	$1,623,300	$2,080,400	$1,005,700	$3,086,100	$3,276,100	$1,433,300	$4,709,400
	Commercial Service Airports Total	**12,124**	**2,956**	**15,080**	**$482,354,900**	**$129,603,100**	**$611,958,000**	**$362,504,100**	**$131,451,500**	**$493,955,600**	**$844,859,000**	**$261,054,600**	**$1,105,913,600**

Source: WYDOT, Study Airports, USDOT, Study Surveys, and IMPLAN

Total Annual Economic Impact for Each Study Airport – Local Models

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Commercial Service Airports													
CPR	Casper - Natrona County International Airport	856	330	1,186	$29,967,500	$12,050,600	$42,018,100	$66,914,900	$30,381,800	$97,296,700	$96,882,400	$42,432,400	$139,314,800
CYS	Cheyenne Regional Airport - Jerry Olson Field	1,197	1,070	2,267	$48,651,300	$27,498,500	$76,149,800	$69,001,700	$53,014,400	$122,016,100	$117,653,000	$80,512,900	$198,165,900
COD	Cody - Yellowstone Regional Airport	505	144	649	$14,681,100	$4,595,300	$19,276,400	$29,750,900	$10,777,200	$40,528,100	$44,432,000	$15,372,500	$59,804,500
GCC	Gillette - Northeast Wyoming Regional Airport	243	81	324	$7,730,700	$3,591,800	$11,322,500	$14,847,700	$6,472,600	$21,320,300	$22,578,400	$10,064,400	$32,642,800
JAC	Jackson Hole Airport	11,918	2,992	14,910	$503,036,800	$139,923,600	$642,960,400	$413,972,400	$153,027,400	$566,999,800	$917,009,200	$292,951,000	$1,209,960,200
LAR	Laramie Regional Airport	200	93	293	$7,264,200	$2,960,300	$10,224,500	$15,762,900	$8,132,100	$23,895,000	$23,027,100	$11,092,400	$34,119,500
RIW	Riverton - Central Wyoming Regional Airport	117	45	162	$4,600,600	$2,522,200	$7,122,800	$9,328,000	$3,960,000	$13,288,000	$13,928,600	$6,482,200	$20,410,800
RKS	Rock Springs - Southwest Wyoming Regional Airport	230	72	302	$7,419,600	$2,243,900	$9,663,500	$16,232,300	$6,248,600	$22,480,900	$23,651,900	$8,492,500	$32,144,400
SHR	Sheridan County Airport	236	95	331	$8,700,600	$3,522,500	$12,223,100	$22,648,200	$9,084,300	$31,732,500	$31,348,800	$12,606,800	$43,955,600
	Commercial Service Airports Total	**15,502**	**4,922**	**20,424**	**$632,052,400**	**$198,908,700**	**$830,961,100**	**$658,459,000**	**$281,098,400**	**$939,557,400**	**$1,290,511,400**	**$480,007,100**	**$1,770,518,500**
Business Airports													
AFO	Afton - Lincoln County Municipal Airport	62	26	88	$2,845,500	$1,184,000	$4,029,500	$8,482,300	$2,267,200	$10,749,500	$11,327,800	$3,451,200	$14,779,000
BYG	Buffalo - Johnson County Airport	12	3	15	$360,600	$124,300	$484,900	$1,352,300	$517,700	$1,870,000	$1,712,900	$642,000	$2,354,900
DGW	Douglas - Converse County Airport	12	4	16	$442,200	$110,200	$552,400	$1,458,200	$385,100	$1,843,300	$1,900,400	$495,300	$2,395,700
EVW	Evanston-Uinta County Airport - Burns Field	22	7	29	$613,100	$240,300	$853,400	$1,631,600	$626,800	$2,258,400	$2,244,700	$867,100	$3,111,800
GEY	Greybull - South Big Horn County Airport	20	9	29	$1,000,700	$170,400	$1,171,100	$1,509,600	$500,100	$2,009,700	$2,510,300	$670,500	$3,180,800
LND	Lander - Hunt Field	30	9	39	$1,606,900	$1,076,600	$2,683,500	$3,796,700	$1,328,100	$5,124,800	$5,403,600	$2,404,700	$7,808,300
PNA	Pinedale - Ralph Wenz Field	24	8	32	$886,400	$255,300	$1,141,700	$2,034,300	$713,600	$2,747,900	$2,920,700	$968,900	$3,889,600
RWL	Rawlins Municipal Airport - Harvey Field	14	3	17	$654,300	$145,900	$800,200	$1,400,900	$359,100	$1,760,000	$2,055,200	$505,000	$2,560,200
SAA	Saratoga - Shively Field	148	24	172	$4,073,200	$757,800	$4,831,000	$6,947,800	$1,832,000	$8,779,800	$11,021,000	$2,589,800	$13,610,800
TOR	Torrington Municipal Airport	11	3	14	$463,800	$143,500	$607,300	$1,215,900	$387,400	$1,603,300	$1,679,700	$530,900	$2,210,600
WRL	Worland Municipal Airport	30	12	42	$1,409,100	$285,500	$1,694,600	$4,210,900	$559,100	$4,770,000	$5,620,000	$844,600	$6,464,600
	Business Airports Total	**385**	**108**	**493**	**$14,355,800**	**$4,493,800**	**$18,849,600**	**$34,040,500**	**$9,476,200**	**$43,516,700**	**$48,396,300**	**$13,970,000**	**$62,366,300**
Intermediate Airports													
BPI	Big Piney - Miley Memorial Field	5	2	7	$163,600	$59,300	$222,900	$322,300	$131,900	$454,200	$485,900	$191,200	$677,100
DUB	Dubois Municipal Airport	4	3	7	$166,800	$90,300	$257,100	$582,100	$279,800	$861,900	$748,900	$370,100	$1,119,000
FBR	Fort Bridger Airport	3	2	5	$93,200	$39,900	$133,100	$316,200	$146,000	$462,200	$409,400	$185,900	$595,300
GUR	Guernsey - Camp Guernsey Army Airfield	13	9	22	$867,600	$257,100	$1,124,700	$1,091,900	$680,000	$1,771,900	$1,959,500	$937,100	$2,896,600
EMM	Kemmerer Municipal Airport	5	2	7	$172,300	$79,700	$252,000	$440,900	$222,200	$663,100	$613,200	$301,900	$915,100
ECS	Newcastle - Mondell Field	10	2	12	$344,100	$85,500	$429,600	$1,100,600	$346,800	$1,447,400	$1,444,700	$432,300	$1,877,000
82V	Pine Bluffs Municipal Airport	9	2	11	$431,300	$180,200	$611,500	$1,216,000	$456,900	$1,672,900	$1,647,300	$637,100	$2,284,400
POY	Powell Municipal Airport	13	6	19	$481,000	$207,500	$688,500	$1,004,100	$424,600	$1,428,700	$1,485,100	$632,100	$2,117,200
HSG	Thermopolis - Hot Springs County Airport	12	4	16	$424,600	$73,500	$498,100	$1,184,400	$277,800	$1,462,200	$1,609,000	$351,300	$1,960,300
EAN	Wheatland - Phifer Airfield	10	4	14	$338,200	$191,400	$529,600	$1,522,100	$494,900	$2,017,000	$1,860,300	$686,300	$2,546,600
	Intermediate Airports Total	**84**	**36**	**120**	**$3,482,700**	**$1,264,400**	**$4,747,100**	**$8,780,600**	**$3,460,900**	**$12,241,500**	**$12,263,300**	**$4,725,300**	**$16,988,600**

FAA ID	Airport Name	Direct Employment	Indirect/Induced Employment	Total Employment	Direct Payroll	Indirect/Induced Payroll	Total Payroll	Direct Spending	Indirect/Induced Spending	Total Spending	Direct Annual Economic Activity	Indirect/Induced Annual Economic Activity	Total Annual Economic Activity
Local Airports													
U68	Cowley - North Big Horn County Airport	3	1	4	$114,100	$26,200	$140,300	$507,500	$173,700	$681,200	$621,600	$199,900	$821,500
DWX	Dixon Airport	7	<1	7	$319,200	$72,100	$391,300	$996,000	$259,000	$1,255,000	$1,315,200	$331,100	$1,646,300
W43	Hulett Municipal Airport	1	1	2	$42,400	$10,200	$52,600	$86,000	$45,800	$131,800	$128,400	$56,000	$184,400
LSK	Lusk Municipal Airport	1	<1	1	$53,100	$10,100	$63,200	$200,100	$52,900	$253,000	$253,200	$63,000	$316,200
	Local Airports Total	**12**	**2**	**14**	**$528,800**	**$118,600**	**$647,400**	**$1,789,600**	**$531,400**	**$2,321,000**	**$2,318,400**	**$650,000**	**$2,968,400**
	All Airports Total	**15,983**	**5,068**	**21,051**	**$650,419,700**	**$204,785,500**	**$855,205,200**	**$703,069,700**	**$294,566,900**	**$997,636,600**	**$1,353,489,400**	**$499,352,400**	**$1,852,841,800**

Source: Jviation

Total Impacts for All Wyoming Airports – Local Models

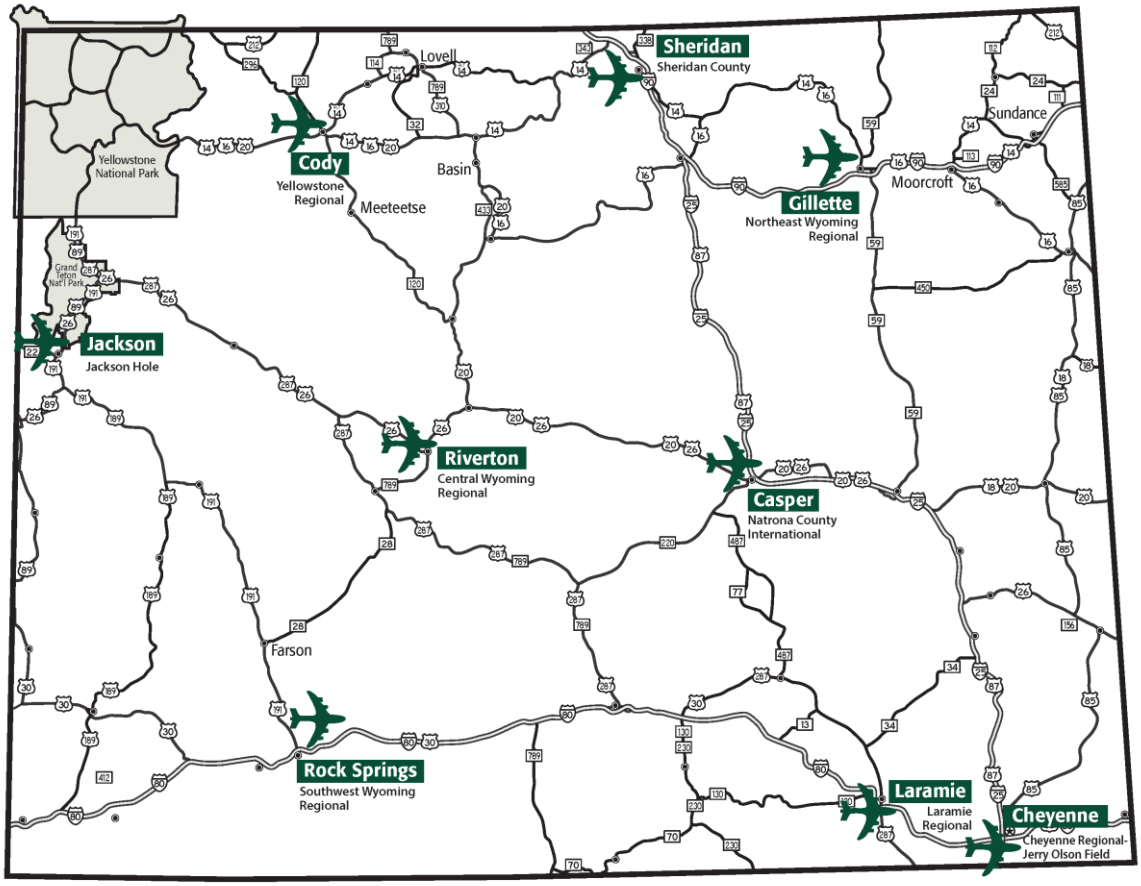
FAA ID	Airport Name	Total Employment	Total Payroll	Total Spending	Total Annual Economic Activity
Commercial Service Airports					
CPR	Casper - Natrona County International Airport	1,186	$42,018,100	$97,296,700	$139,314,800
CYS	Cheyenne Regional Airport - Jerry Olson Field	2,267	$76,149,800	$122,016,100	$198,165,900
COD	Cody - Yellowstone Regional Airport	649	$19,276,400	$40,528,100	$59,804,500
GCC	Gillette - Northeast Wyoming Regional Airport	324	$11,322,500	$21,320,300	$32,642,800
JAC	Jackson Hole Airport	14,910	$642,960,400	$566,999,800	$1,209,960,200
LAR	Laramie Regional Airport	293	$10,224,500	$23,895,000	$34,119,500
RIW	Riverton - Central Wyoming Regional Airport	162	$7,122,800	$13,288,000	$20,410,800
RKS	Rock Springs - Southwest Wyoming Regional Airport	302	$9,663,500	$22,480,900	$32,144,400
SHR	Sheridan County Airport	331	$12,223,100	$31,732,500	$43,955,600
	Commercial Service Airports Total	**20,424**	**$830,961,100**	**$939,557,400**	**$1,770,518,500**
Business Airports					
AFO	Afton - Lincoln County Municipal Airport	88	$4,029,500	$10,749,500	$14,779,000
BYG	Buffalo - Johnson County Airport	15	$484,900	$1,870,000	$2,354,900
DGW	Douglas - Converse County Airport	16	$552,400	$1,843,300	$2,395,700
EVW	Evanston-Uinta County Airport - Burns Field	29	$853,400	$2,258,400	$3,111,800
GEY	Greybull - South Big Horn County Airport	29	$1,171,100	$2,009,700	$3,180,800
LND	Lander - Hunt Field	39	$2,683,500	$5,124,800	$7,808,300
PNA	Pinedale - Ralph Wenz Field	32	$1,141,700	$2,747,900	$3,889,600
RWL	Rawlins Municipal Airport - Harvey Field	17	$800,200	$1,760,000	$2,560,200
SAA	Saratoga - Shively Field	172	$4,831,000	$8,779,800	$13,610,800
TOR	Torrington Municipal Airport	14	$607,300	$1,603,300	$2,210,600
WRL	Worland Municipal Airport	42	$1,694,600	$4,770,000	$6,464,600
	Business Airports Total	**493**	**$18,849,600**	**$43,516,700**	**$62,366,300**
Intermediate Airports					
BPI	Big Piney - Miley Memorial Field	7	$222,900	$454,200	$677,100
DUB	Dubois Municipal Airport	7	$257,100	$861,900	$1,119,000
FBR	Fort Bridger Airport	5	$133,100	$462,200	$595,300
GUR	Guernsey - Camp Guernsey Army Airfield	22	$1,124,700	$1,771,900	$2,896,600
EMM	Kemmerer Municipal Airport	7	$252,000	$663,100	$915,100
ECS	Newcastle - Mondell Field	12	$429,600	$1,447,400	$1,877,000

FAA ID	Airport Name	Total Employment	Total Payroll	Total Spending	Total Annual Economic Activity
82V	Pine Bluffs Municipal Airport	11	$611,500	$1,672,900	$2,284,400
POY	Powell Municipal Airport	19	$688,500	$1,428,700	$2,117,200
HSG	Thermopolis - Hot Springs County Airport	16	$498,100	$1,462,200	$1,960,300
EAN	Wheatland - Phifer Airfield	14	$529,600	$2,017,000	$2,546,600
	Intermediate Airports Total	**120**	**$4,747,100**	**$12,241,500**	**$16,988,600**
Local Airports					
U68	Cowley - North Big Horn County Airport	4	$140,300	$681,200	$821,500
DWX	Dixon Airport	7	$391,300	$1,255,000	$1,646,300
W43	Hulett Municipal Airport	2	$52,600	$131,800	$184,400
LSK	Lusk Municipal Airport	1	$63,200	$253,000	$316,200
	Local Airports Total	**14**	**$647,400**	**$2,321,000**	**$2,968,400**
	All Airports Total	**21,051**	**$855,205,200**	**$997,636,600**	**$1,852,841,800**

Source: Jviation

APPENDIX B – WYOMING AIR SERVICE ENHANCEMENT PROGRAM RETURN ON INVESTMENT ANALYSIS – 2020 UPDATE

WYOMING AIR SERVICE ENHANCEMENT PROGRAM RETURN ON INVESTMENT ANALYSIS - 2020 UPDATE



Mead & Hunt, Inc. in conjunction with Jviation, Inc.

EXECUTIVE SUMMARY

Mead & Hunt, Inc. in conjunction with Jviation, updated the Wyoming Department of Transportation's (WYDOT) Air Service Enhancement Program (ASEP) return on investment (ROI) study from 2016 to evaluate the economic impact of each route supported through revenue guarantees by the Wyoming ASEP from 2004 to the first quarter of 2020.

The 2016 study looked at the total economic impact of the ASEP routes, which consisted of both the direct impact and multiplier effects (including indirect and induced economic impacts). This update narrows the focus and takes the more conservative approach of considering only direct impacts. These direct impacts consist of the jobs, payroll, and output associated with the airline activity of 1) on-airport related activities, 2) capital projects, and 3) off-airport direct visitor spending. Economic impacts stemming from general commercial aviation activity at Wyoming's commercial service airports were excluded to the extent possible. The on-airport component includes businesses and organizations engaged in day-to-day airport operations and projects. The visitor spending component includes direct spending by the visitors brought to Wyoming communities by these ASEP-supported routes.

The 2016 study calculated the return on investment (ROI) for each dollar the state of Wyoming invested in the ASEP. This update revises that ROI calculation to include the local community investment in ASEP routes. To allow for comparisons across years, all dollar figures have been converted to the equivalent of 2019 dollars.

The analysis found that the WYDOT ASEP continues to have a strong positive impact on the economies of regions surrounding participating airports.

The $60.5 million invested in the 81 ASEP routes evaluated over the 17-year period have:

- Produced a direct economic output of nearly $808 million for an average ROI of 12.36 for every dollar invested. That equates to over $13 of economic output for every $1 invested by the state and local communities.
- Supported over 9,500 jobs on and off airport.
- Produced over 451,000 incremental[1] visitors to the state with total incremental visitor spending of over $583 million.
- Driven incremental state tax revenues of over $55.8 million.

[1] In addition to or above what would otherwise have been without the service.

Table ES-1 Executive Summary – ASEP Program ROI by Airport

Airport	ASEP Investment (State and Local)	Direct Economic Output	ROI
Cody - Yellowstone Regional Airport	$ 3,668,938	$ 75,188,115	19.49
Casper - Natrona County International Airport	$ 3,118,217	$ 12,217,449	2.92
Cheyenne Regional Airport - Jerry Olson Field	$ 6,230,391	$ 42,821,323	5.87
Gillette - Northeast Wyoming Regional Airport	$ 13,266,856	$ 35,208,598	1.65
Jackson Hole Airport	$ 5,674,705	$ 498,473,365	86.84
Riverton - Central Wyoming Regional Airport	$ 6,107,672	$ 25,566,496	3.19
Rock Springs - SW Wyoming Regional Airport	$ 14,385,228	$ 80,485,843	4.60
Sheridan County Airport	$ 8,034,173	$ 37,948,153	3.72
Total	**$ 60,486,181**	**$ 807,909,342**	**12.36**
Total excluding Jackson Hole	**$ 54,811,476**	**$ 309,435,977**	**5.65**

Even using the conservative approach of considering only direct economic output, the ASEP continues to generate significant economic benefits for the State of Wyoming by increasing airport activity and the volume of commercial passengers carried by improving air service connectivity. The program has also resulted in a significant increase in tax revenue to the state, largely generated by incremental visitor spending. Importantly, all routes subsidized through the ASEP resulted in economic benefits significantly larger than the investment made by the state. On average the ASEP's 12.36 ROI means it has produced over $13 dollars of direct economic output for every dollar invested by the state and local communities.

The Jackson Hole Airport, with an average per visitor spend of over $1,900 drives a disproportionately high average ROI of 86.84 compared to the other seven airports. This certainly raises the overall ROI for the entire program, but if we exclude Jackson Hole from the program calculation, we still see a strong direct ROI of 5.65 or $6.65 returned for every dollar invested in the ASEP.

There are certainly some route investments that have been more marginal and deserve further review, but the overwhelming majority of ASEP routes produced strong returns. This suggests that the ASEP continues to provide a vital and responsible public investment of taxpayer dollars by the Wyoming Legislature and communities. This is an investment that enhances access and economic performance in the state.

BACKGROUND

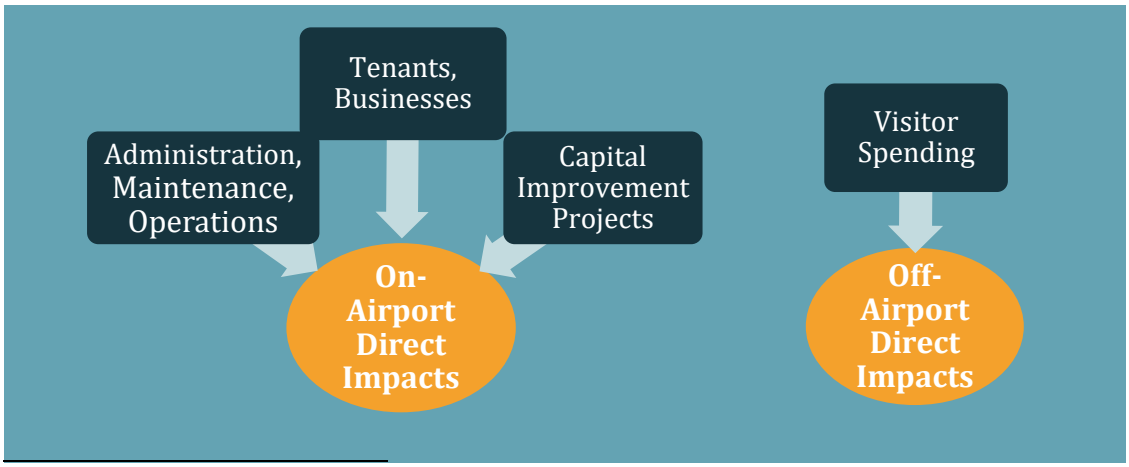
The Wyoming Legislature created the ASEP in 2004 to combat limited air service with high airfares and to generate economic growth. At the time, Wyoming had the 5th highest airfares in the country, which led many Wyoming residents to drive to airports outside of the state to find reduced fares, better schedules, increased reliability, and greater air service choices. Since 2004, the ASEP, administered by the WYDOT Aeronautics Division's Air Service Development Program, has supported 81routes at a cost of almost $36 million in state support plus another $24 million from local community support. These investments are made in the form of revenue guarantees to airlines to support new nonstop routes from Wyoming airports. The revenue guarantee essentially guarantees the airline that an acceptable amount of revenue will be produced by the new route and if not, the State and local community will make up the difference up to an agreed-upon cap in order to support the route. If the route performs better than expected, then less of that guarantee money would be paid out. This program continues to put Wyoming at the national forefront in enhancing air service on a statewide basis.

Mead & Hunt worked with Jviation to analyze the ROI. The team estimated the employment, payroll, and economic output associated with each route subsidized by the ASEP from 2004-2020. Using the impact analysis for planning model (IMPLAN, an industry standard software for economic analysis) and inputs such as visitor spending from the 2019 updated airport survey conducted by Jviation, a methodology was developed to assess the ROI of the ASEP. Though estimating accurately the true net incremental[2] jobs and visitor spending that occur as a result of a route is complicated, by using detailed airport and route-specific impacts, employment numbers, and local visitor spending and economic activity, this analysis represents a credible methodology to allocate impacts across individual route decisions. The methodology for this approach is outlined below along with highlighted results of the analysis.

METHODOLOGY

To measure the economic impact of each subsidized route, two categories of **direct impacts** were evaluated: 1) off-airport visitor spending and 2) on-airport related activities.

Figure 1: Direct Impacts of Individual Routes



[2] In addition to or above what would otherwise have been without the service.

Within each of these two areas, estimates were made for employment, payroll, and economic output, as defined below, directly attributable to each route:

- **EMPLOYMENT –** the number of employees who have jobs related to commercial air service, and more specifically, each route. These are expressed as full-time equivalents with two part-time jobs equaling one full-time job.
- **PAYROLL** – the annual wages, salaries, and benefits associated with the jobs supported by the route.
- **ECONOMIC OUTPUT** – the economic activity generated by the route and associated activity. Economic output includes spending of businesses such as airlines, ground-handling services, retail and food vendors, airport management, operations staff, and government organizations. Capital expenditures of these businesses and government organizations are included. Visitor purchases are included as off-airport direct spending. Visitor purchases made at the airport are included as on-airport economic output. **For example, if commercial service at an airport generated $20 million in economic output, that amount would represent the lost economic activity if the airport were to lose that commercial service.**

In the original 2016 ROI study, estimates were made for the impact of spending, or re-circulation, and re-spending of direct impacts within the economy, or waves of economic activity known as **multiplier effects.** While multiplier effects are commonly accepted as integral economic impacts from activities such as commercial air service, this study is limited to direct economic activity in order to take a conservative approach to the evaluation of these investments. The 2016 study also limited the ROI calculation to only the investments by the State of Wyoming in each ASEP route. This study expands the investment to include any funds contributed by the local community to support the ASEP routes.

Off-Airport Economic Impact (Visitor Spending)

Off-airport economic impacts relate to the spending by visitors who arrive at a destination on a commercial flight. Once these visitors arrive at a destination, they spend money for lodging, ground transportation, food, recreation, retail, and entertainment. To calculate visitor spending or output, the first step is to identify the percentage of passenger enplanements that are not from the local area. The data on the percentage of visitors for each market came from passenger surveys from USDOT data as supplied by WYDOT to Jviation for use in the 2020 Aviation Economic Impact Study.

Next, the total number of visitors for each route is multiplied by the average amount each passenger spends per visit. This amount also came from passenger surveys at each Wyoming airport and was adjusted for inflation to ensure the use of constant dollars for each program year. To calculate total visitor spending for a route:

Total Enplanements **X** Percentage of Visitors **X** Average Amount Per Trip = Total Visitor Spending

For example, Route #1 from ABC-DEF has 10,000 enplanements from January 2018 to December 2018. ABC's market averages 55 percent of visitors to the region. The average passenger in ABC spends $500.00 per trip. As a result:

10,000 **X** (.55) **X** ($500.00) = $2,750,000

Then, IMPLAN is used to determine the number of jobs and payroll supported by the amount of visitor spending for each route using county level estimates for the airport's economic impact on its local market area. As is the case with on-airport economic impacts, the visitor spending-related jobs and payroll generate both indirect and induced multiplier impacts. Once again, to maintain a conservative approach, multiplier effects have been excluded from this study. See **Tables 3 and 3a** for a comparison of the direct economic output and total economic output including multipliers.

On-Airport Economic Impact

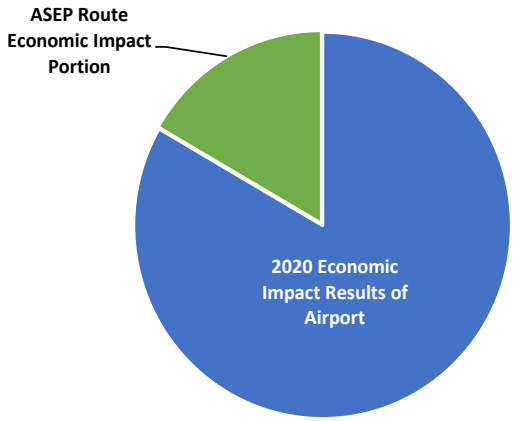
To determine the on-airport economic impact, estimates for the percentage of total airport employment, payroll, and output attributable to each route were derived from airport-level survey data collected by Jviation. The Jviation data accounted for economic impacts stemming from airport management, business tenants, and capital improvement projects.

Adjustment Factors for Economic Impacts

There are two issues that need addressing when using the economic impact results from the 2020 statewide economic impact study. Both have to do with appropriately applying the individual airport economic impact results to this analysis.

The first issue is that this analysis is concerned with the economic impact of specific airline routes, but the 2020 statewide economic impact study results only drill down to the airport level, not the route level. As graphically illustrated at right, the economic impacts of the ASEP routes analyzed in this study are only a portion of the airport's overall economic impacts.

Figure 1a: Illustration of Allocation of Economic Impacts over Routes

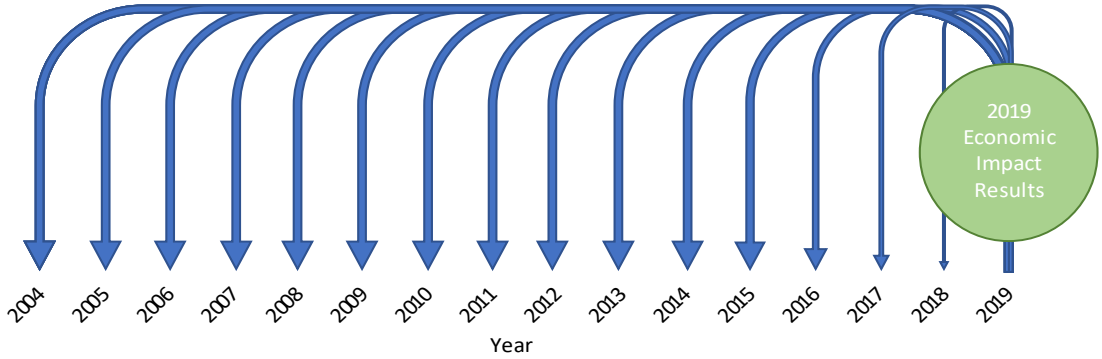


To address this issue, this study applied an adjustment factor to each airport's economic impacts, proportionally allocating the airport's overall economic impacts to routes based on enplanements.

The second issue is that the analysis looks at routes over a multiyear period, but only has economic impact results for 2019. It would be misleading to assume that the 2019 economic impacts from the ASEP can be directly applied to other years. As illustrated graphically below, an adjustment factor was applied to each airport's 2019 economic impacts to translate the 2019 economic impacts to the year of interest. This adjustment accounted for the difference in aviation activity between 2019 and the year the analyzed route operated. This adjustment

accounts for changes in aviation activity through a proportional allocation method using passenger enplanements.

Figure 1b: Illustration of Allocation of Economic Impacts over Years

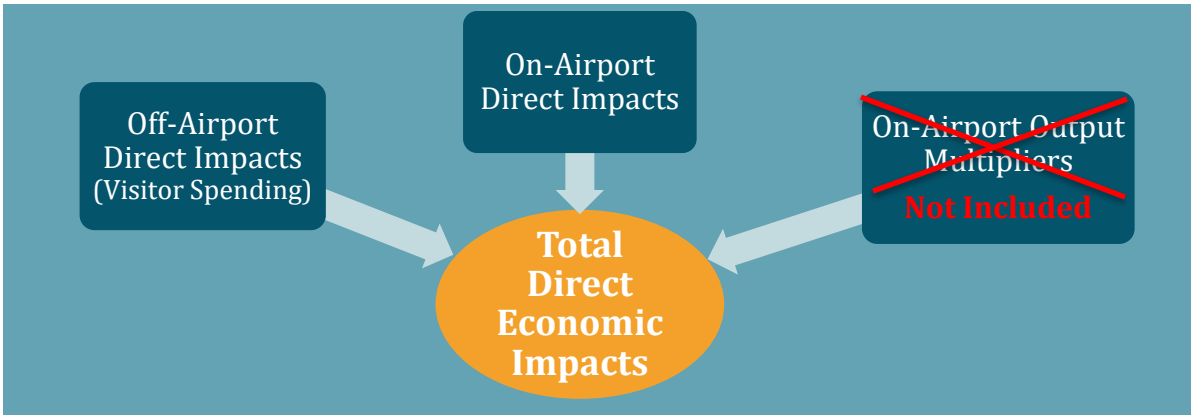


Adjusting the related payroll and output figures for inflation ensures the analysis is using constant dollars for both the impacts and the revenue guarantees provided by the ASEP. In this update, all dollar amounts for each ASEP year have been converted to 2019 dollars.

Total Direct Economic Impacts

To calculate the total direct economic impacts, the direct off-airport visitor-related spending is combined with the direct on-airport impacts after the adjustments described above were made. Total Impact = Visitor Spending + On-Airport Output as illustrated below. Note that the multiplier effects from on-airport activity have been excluded from this study.

Figure 2: Composition of Economic Impacts for Individual Routes



Return on Investment Analysis

The following formula was used to calculate the ROI for each route subsidized through the ASEP:

$$ROI = \frac{Economic\ Impact\ From\ Investment - Initial\ Investment}{Initial\ Investment}$$

ROI is presented as a ratio, with 0 indicating a break-even scenario and 1 equaling a doubling of the initial investment amount. To make things easier to interpret, calculations include the payroll and output impact per $1 of ASEP investment for each route.

State Tax Revenue

The inputs used in the IMPLAN model to calculate the state tax revenue for each route are the visitor spending, on-airport output, and payroll data. The IMPLAN model generated estimates of tax revenues using 2019 state tax rates and taxing structures. The model measured the direct sales tax revenue generated through each route.

RESULTS OF ANALYSIS

SUMMARY OF ASEP INVESTMENT

Between 2004 and 2019, the ASEP supported a total of 81 routes with a total investment of just over $60 million (in 2019 dollars) including both the state's investment and the local community investment. **Table 1** shows the ASEP investment, direct economic output, and direct ROI summarized by airport for the updated 2016 study routes, the new routes since the 2016 study, and the total across the entire 17-year period.

Table 1 Direct Output by Airport

Airport	Pre-2016 (Projects 1-60) ASEP Investment	Direct Output	Direct ROI	Post-2016 (Projects 61-81) ASEP Investment	Direct Output	Direct ROI	All Projects (Projects 1-81) ASEP Investment	Direct Output	Direct ROI
Cody - Yellowstone Regional Airport	$3,440,644	$74,144,746	20.55	$228,294	$1,043,369	3.57	$3,668,938	$75,188,115	19.49
Casper - Natrona County International Airport	$3,118,217	$12,217,449	2.92	$0	$0	N/A	$3,118,217	$12,217,449	2.92
Cheyenne Regional Airport - Jerry Olson Field	$3,239,914	$21,221,971	5.55	$2,990,477	$21,599,352	6.22	$6,230,391	$42,821,323	5.87
Gillette - Northeast Wyoming Regional Airport	$11,562,526	$32,069,532	1.77	$1,704,330	$3,139,066	0.84	$13,266,856	$35,208,598	1.65
Jackson Hole Airport	$3,574,367	$388,539,444	107.70	$2,100,339	$109,933,921	51.34	$5,674,705	$498,473,365	86.84
Riverton - Central Wyoming Regional Airport	$225,041	$3,912,392	16.39	$5,882,631	$21,654,104	2.68	$6,107,672	$25,566,496	3.19
Rock Springs - SW Wyoming Regional Airport	$10,799,136	$29,744,103	1.75	$3,586,091	$50,741,740	13.15	$14,385,228	$80,485,843	4.60
Sheridan County Airport	$0	$0	N/A	$8,034,173	$37,948,153	3.72	$8,034,173	$37,948,153	3.72
Total	**$35,959,845**	**$561,849,636**	**14.62**	**$24,526,336**	**$246,059,705**	**9.03**	**$60,486,181**	**$807,909,342**	**12.36**

Note: All financial figures adjusted to 2019 dollars.

Table 1 shows the direct ROI from the ASEP routes in the 2016 study provided an ROI of 14.62 on the total state and community investment of almost $36 million. The ROI for the $24.5 million invested in the 21 programs since the 2016 study declined to just over 9, but still on average produced a strongly positive ROI. Over the entire 17-year period, the ASEP produced an average ROI of 12.36.

Figure 3 illustrates the number and percentage of revenue guarantees paid out by the state to commercial service airports in Wyoming. Of the 81 routes subsidized, 25 (31 percent) were from Jackson (JAC), 18 (22 percent) from Cody (COD), 14 from Rock Springs (RKS), 11 from Gillette, 4 each from Cheyenne and Riverton, 3 from Sheridan, and 2 from Casper. **Figure 4** illustrates the distribution of state and community ASEP investment dollars by airport from 2004 to 2019 (adjusted to 2019 dollars). RKS routes have received more than $14.4 million (24 percent of the total) in ASEP investment, while GCC routes received $13.3 million (22 percent). While routes at JAC received 31 percent of the total number of revenue guarantees, they represented only 9 percent of the total ASEP investment dollars.

Figure 3: Number of ASEP Routes by Airport

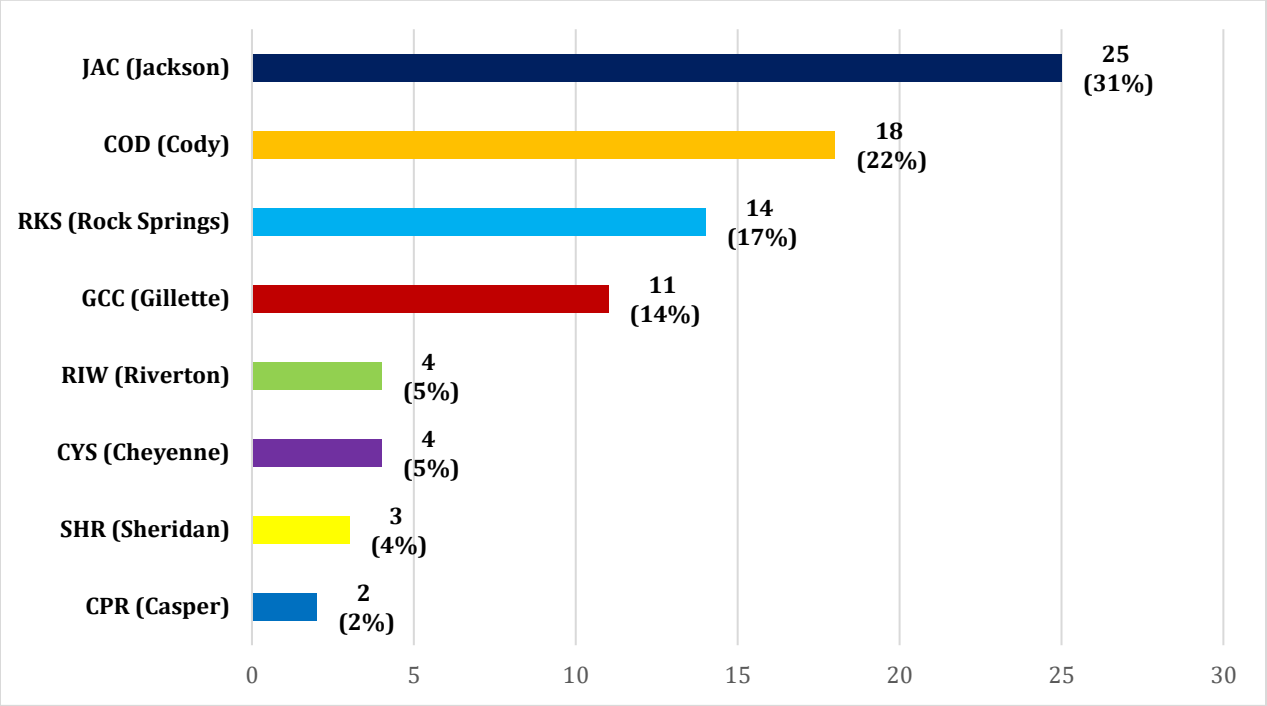
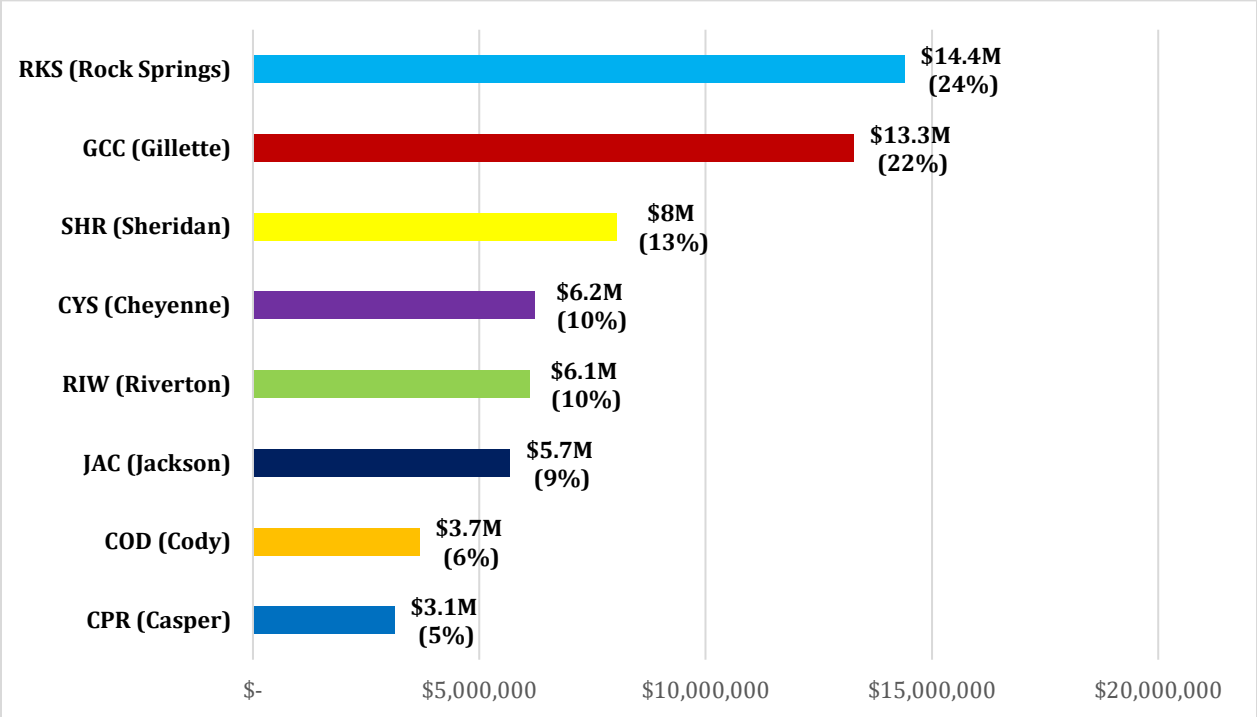


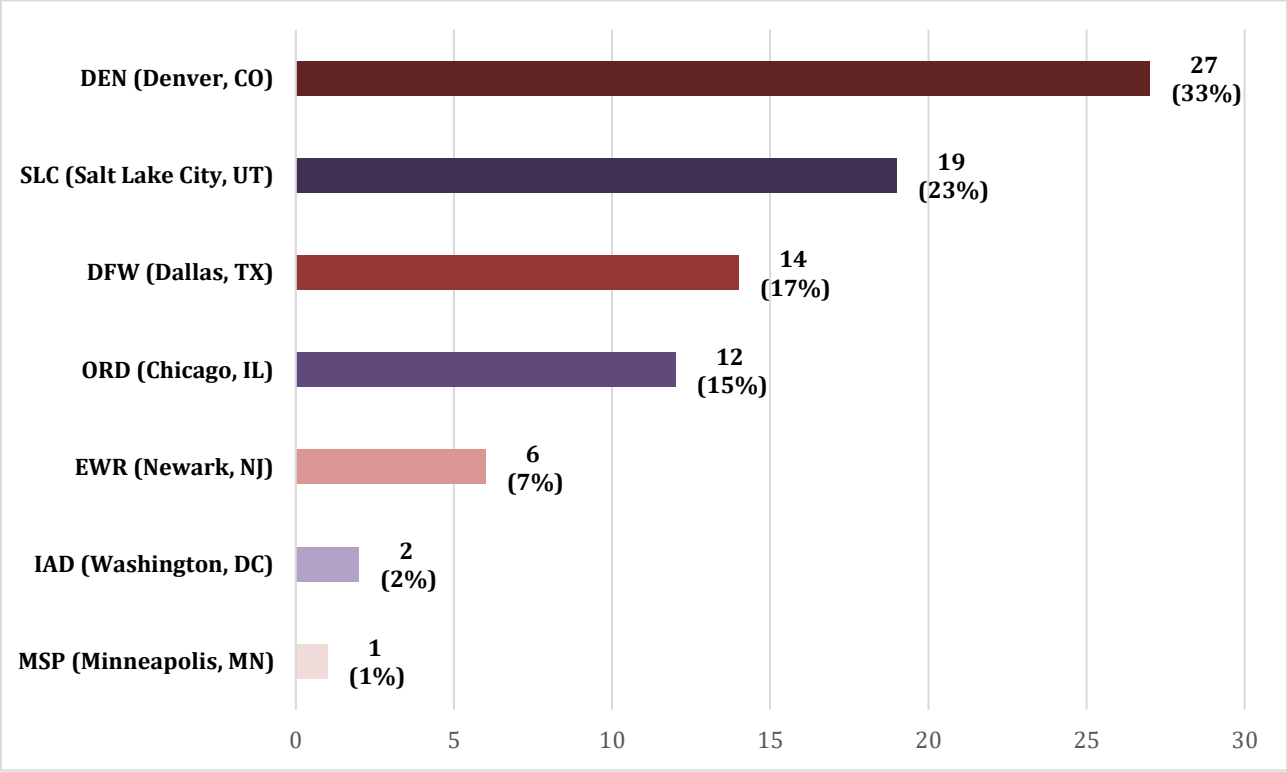
Figure 4: ASEP Investments by Airport



One of the major goals of the ASEP is to improve the connectivity and number of non-stop destinations available to residents of Wyoming and visitors traveling to the state. **Figure 5**

illustrates the number of ASEP subsidized routes by destination during the study period. As expected, many of these routes were regional jet flights to legacy carrier hubs including Denver (DEN) (United Airlines), Salt Lake City (SLC) (Delta Air Lines), Chicago (ORD) (American Airlines and United Airlines), and Dallas (DFW) (American Airlines). Thirty-three percent of the routes subsidized by the ASEP were to DEN while another 23 percent were to SLC.

Figure 5: Number of ASEP Routes by Destination



STATEWIDE ECONOMIC IMPACT

This section presents the statewide direct economic impact for all routes subsidized through the ASEP from 2004 to March 2020.[3] The results presented below are based on the 81 routes provided by WYDOT at the time of the analysis. **Table 2** illustrates that the routes subsidized by the ASEP resulted in a total of 695,273 enplanements that supported 9,569 jobs and resulted in a direct economic impact of almost $808 million. These programs also generated more than $55.8 million in state tax revenue. For comparison purposes, all dollars in the following tables have been adjusted to 2019-dollar equivalents.

[3] For consistency, the analysis included all ASEP projects including ASJAC01, ASE09, and ASCOD03. These projects had no investment from the ASEP due to the profitability of the routes. While the ROI for these routes is effectively zero (because no investment was actually made), the benefits from each route were included in the total calculation.

Table 2 ASEP Direct Economic Impacts and Tax Revenue

Period	Number of ASEP Routes	ASEP Investment	Total Route Enplanements	Direct Jobs Supported	Direct Output	State and Local Sales Taxes
Pre-2016	60	$35,959,845	464,699	6,891	$561,849,636	$39,395,937
Post-2016	21	$24,526,336	230,574	2,678	$246,059,705	$16,406,065
Total	**81**	**$60,486,181**	**695,273**	**9,569**	**$807,909,342**	**$55,802,003**

Table 3 illustrates the composition of the direct economic impact of $807 million. A detailed breakdown of these impacts by ASEP route, year, and market supported is shown in the appendix in **Table 9**. The direct airport management output that can be attributed to the 81 ASEP routes was approximately $60 million. Tenants operating at the airport produced over $107 million in impact, while capital improvement project (CIP) investments at the airport generated another $57 million. In addition, the ASEP routes brought more than 451,000 visitors to the state of Wyoming, resulting in visitor spending of $583 million. While this study just highlights the direct economic output associated with the ASEP routes, the multiplier effects, if included, would add another $395 million in total output, placing the total economic impact including multiplier effects at over $1.2 billion. This is shown in **Table 3a**.

Table 3 Composition of Statewide Direct Output

Direct Airport Management Output	Direct Business Tenant Output	Direct CIP Output	Direct Visitor Spending	All Direct Output
$59,830,869	$107,364,474	$57,447,358	$583,266,640	$807,909,342

Table 3a Composition of Statewide Total Output including multipliers

Total Airport Management Output	Total Business Tenant Output	Total CIP Output	Total Visitor Spending	Total Output
$109,695,303	$160,765,300	$91,946,971	$840,496,925	$1,202,904,499

Table 4 presents the statewide direct ROI analysis of all routes subsidized by the ASEP. Using the total ASEP investment amount of $60,486,181 including both the state and local investments for the 81 routes analyzed and the direct economic impact of $807,909,342 produces a return of $13.36 for each dollar invested by the state and an overall ROI of 12.36. **For every dollar invested in subsidizing air service through the ASEP, $13.36 was generated in local direct economic output.**

Table 4 ROI Analysis-Direct Output

Period	ASEP Investment	Direct Output	Direct Output Per Dollar of ASEP Investment	Statewide Direct ROI
Pre-2016	$35,959,845	$561,849,636	$15.62	14.62
Post-2016	$24,526,336	$246,059,705	$10.03	9.03
Total	$60,486,181	$807,909,342	$13.36	12.36

A more conservative approach examined the ROI from only direct visitor spending and the total tax revenue generated by the subsidized routes. As **Table 5** illustrates, $9.64 (ROI 8.64) of visitor spending and $0.92 of state tax revenue are generated for each ASEP dollar invested in air service. Tax revenue calculations include state and local specific sales and excise taxes from airport-related purchases of goods and services. **Substantively, this means the state of Wyoming and local community investments almost broke even on the ASEP investment based on tax dollars generated from the direct economic activity alone.**

Table 5 ROI Analysis - Direct Visitor Spending and Tax Revenue

ASEP Investment	Direct Visitor Spending	Tax Revenue	Direct Visitor Spending Per Dollar of ASEP Investment	State and Local Sales Taxes Per Dollar of ASEP Investment
$60,486,181	$583,266,640	$55,802,003	$9.64 (ROI 8.64)	$0.92 (ROI -0.08)

Table 6 breaks down Direct Visitor Spending and Visitor Spending ROI by airport. At every airport, Visitor Spending Return per Dollar invested in ASEP is a positive gain. Returns range from $1.40 in visitor spending per $1 of ASEP investment at Riverton to as high as $77.45 return per $1 invested at Jackson.

Table 6 Direct Visitor Spending ROI by Airport

Airport	ASEP Investment	Direct Visitor Spending	Direct Visitor Spending Return Per Dollar of ASEP Investment	Direct Visitor Spending ROI
Cody	$3,668,938	$46,448,324	$12.66	11.66
Casper	$3,118,217	$6,628,249	$2.13	1.13
Cheyenne	$6,230,391	$11,966,541	$1.92	0.92
Gillette	$13,266,856	$22,702,855	$1.71	0.71
Jackson	$5,674,705	$439,528,533	$77.45	76.45
Riverton	$6,107,672	$8,527,417	$1.40	0.40
Rock Springs	$14,385,228	$34,475,551	$2.40	1.40
Sheridan	$8,034,173	$12,989,170	$1.62	0.62
Total	**$60,486,181**	**$583,266,640**	**$9.64**	**8.64**

Based on these returns, even if it was assumed for sensitivity purposes, that <u>half</u> of the visitors associated with the ASEP routes would have still found their way to their intended destinations regardless of whether the ASEP route was in place or not, the program would still have produced almost a 5 to 1 return.

PERFORMANCE BY AIRPORT

In the Appendix on pages 16 through 19, we show performance broken down by Wyoming airport. **Figure 6** shows average enplanements per ASEP route with the average ASEP investment generating anywhere from 5,289 passenger enplanements (Cody) to more than 13,300 enplanements in Sheridan. **Figure 7** shows the average ASEP investment (including the local community contribution) per enplanement generated, with the most efficient programs at Jackson (an average of $22 per enplanement) to a high of $248 per enplanement at Riverton. The average for all eight airports was $87 enplanement.

Figures 8 and 9 show average direct economic output and average visitor spending by airport. Economic output ranges from $3.2 million in Gillette to almost $20 million per route in Jackson. Visitor spending per route at seven of the eight airports ranged from $2.1 million in Gillette up to $4.3 million in Sheridan. Jackson with its high-end tourism and ski market related spending drives its average visitor spend to $17.6 million per route.

Figure 10 shows average direct jobs supported per route with employment ranging from 38 jobs at Gillette to more than 260 jobs at Jackson.

Figure 11 shows state and local tax revenue generated per route with taxes ranging from a low of $201,000 per route for Gillette up to almost $1.5 million per route at Jackson.

The next two charts, **Figures 12 and 13**, plot average direct economic return per dollar of investment and average ROI by airport. **Every airport showed positive returns on investment with Jackson showing the highest returns.**

MOST AND LEAST SUCCESSFUL ASEP INVESTMENTS

Table 7 highlights the five most successful ASEP investments as determined by their overall direct ROI. Four of the top five routes were from Jackson (to either Chicago or to Dallas/Ft. Worth) with one Cody-Denver route rounding out the top five. These programs performed well enough to require much lower than average ASEP investment, while still generating large direct economic outputs ranging from $6.8 million to more than $31 million, largely driven by direct visitor spending.

Table 7 Most Successful ASEP Investments by Direct ROI

Project ID	ASEP Project	Project End Date	Route	ASEP Investment	Direct Output	State and Local Sales Taxes	Direct ROI
12	AERE505	4/3/2006	JAC-ORD	$135,035	$30,648,209	$2,290,839	225.96
16	ASE10	4/9/2007	JAC-ORD	$152,548	$31,763,506	$2,374,203	207.22
11	AERE505	4/3/2006	JAC-DFW	$118,593	$23,612,657	$1,764,958	198.11
15	ASE10	4/9/2007	JAC-DFW	$138,021	$26,013,183	$1,944,388	187.47
43	ARASE46	5/30/2012	COD-DEN	$40,037	$6,840,740	$386,959	169.86

Table 8 highlights the five least successful routes subsidized through the ASEP, ranked by total ROI. The five least successful routes were a Rock Springs to Salt Lake City route, a Riverton to Denver route and three Gillette to Salt Lake City routes. While the direct economic output exceeded the investment in each of these five routes, the returns were much weaker than most ASEP routes. The smallest ROI was 0.73 for a 2010 RKS to SLC route. These routes on average filled less than 50 percent of seats and brought fewer visitors to those communities than most ASEP routes. These five routes are the only ASEP investments out of all 81 routes since 2004 to produce less than $2 of direct economic output for every $1 of investment through state and local community support with four of the five reflecting Salt Lake City's weaker performance as a major hub historically

Table 8 Least Successful ASEP Investments by Direct ROI

Project ID	ASEP Project	Project End Date	Route	ASEP Investment	Direct Output	State and Local Sales Taxes	Direct ROI
33	ARASE38	6/30/2010	RKS-SLC	$876,589	$1,520,368	$93,771	0.73
67	ASRIW01	6/30/2017	RIW-DEN	$2,085,704	$3,714,178	$197,265	0.78
62	ASGCC04	6/30/2017	GCC-SLC	$1,704,330	$3,139,066	$197,300	0.84
40	ARASE44	6/30/2011	GCC-SLC	$927,316	$1,763,497	$110,841	0.90
36	ARASE40	12/31/2010	GCC-SLC	$933,328	$1,791,680	$112,612	0.92

CONCLUSION

In summary, even using the conservative approach of considering only direct economic output, the ASEP continues to generate significant economic benefits for the State of Wyoming by increasing airport activity and the volume of commercial passengers carried by improving air service connectivity. The program has also resulted in a significant increase in tax revenue to the state, largely generated by incremental visitor spending. Importantly, all routes

subsidized through the ASEP resulted in economic benefits significantly larger than the investment made by the state. While on average ASEP has produced over $13 dollars of direct economic output for every dollar invested by the state and local communities, there are certainly some investments that are more marginal and deserve further review. The overwhelming majority of ASEP routes, however, produced strong returns. This suggests that the ASEP provides a vital and responsible public investment of taxpayer dollars by the Wyoming Legislature as well as local community financial support. This is an investment that enhances access and economic performance in the state.

There are certainly other significant economic benefits from increased air service over and above the direct benefits measured in this study. The quality of air service for a region helps drive key business investments and growth of manufacturing and retail companies. In Cheyenne, enhanced air service helped attract Kohl's, Dillard's, Lowes, and Target to the city. These types of investments support hundreds of jobs in the local area. In addition, while this study just focused on the direct economic impact, multiplier impacts from downline spending of the income produced by on-airport activity and visitor spending are real impacts and for the ASEP, those impacts amount to almost $400 million over the life of the program so far. While these secondary benefits can be more difficult to measure, it seems clear that while the economic impacts of the ASEP as measured in this study are compelling and provide strong ROIs, the benefits are understated when overall economic investment is considered.

APPENDIX: AVERAGE PER ROUTE DIRECT ECONOMIC IMPACTS BY AIRPORT

Figure 6: Average Enplanements Per ASEP Route by Airport

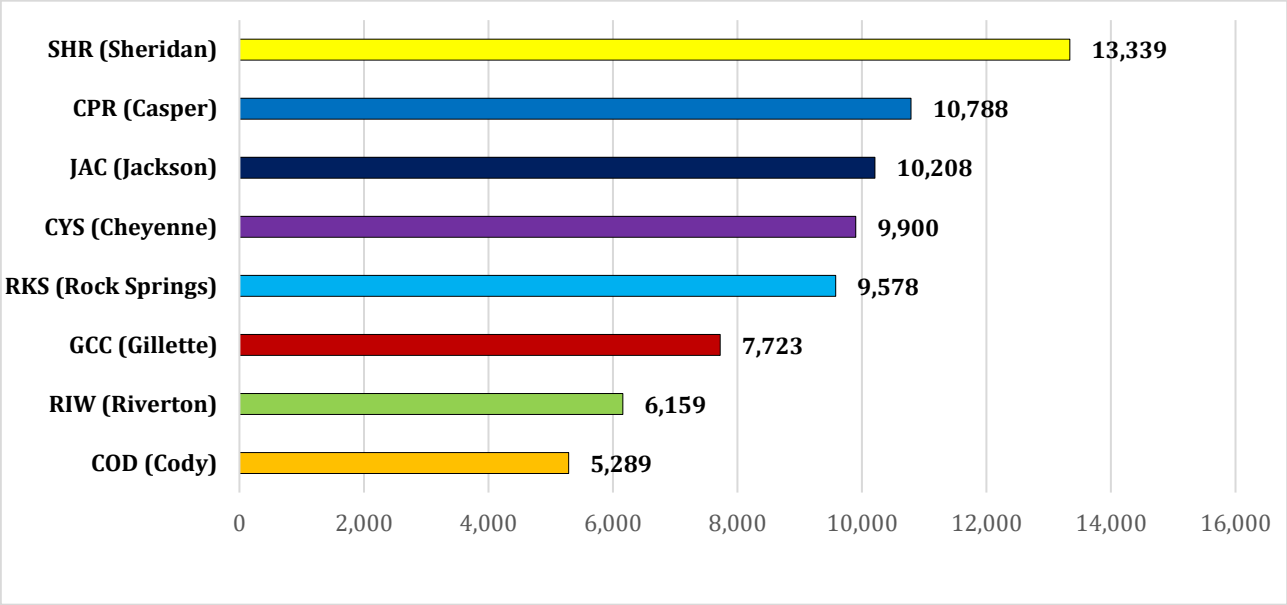


Figure 7: Average ASEP Investment Per ASEP Route Enplanement by Airport

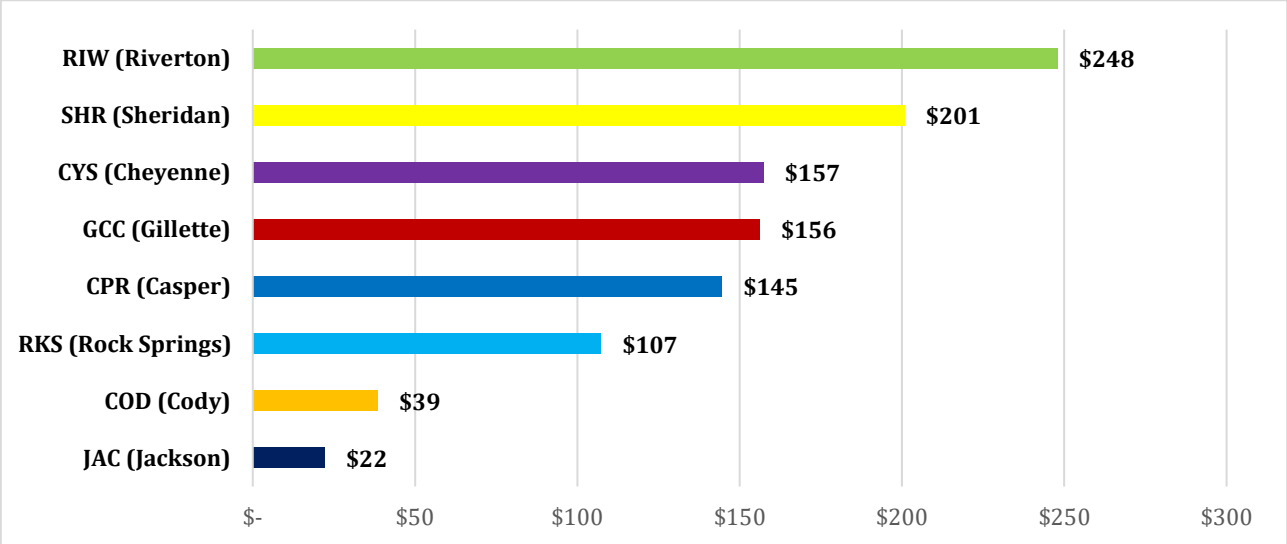


Figure 8: Average Direct Output Per ASEP Route by Airport

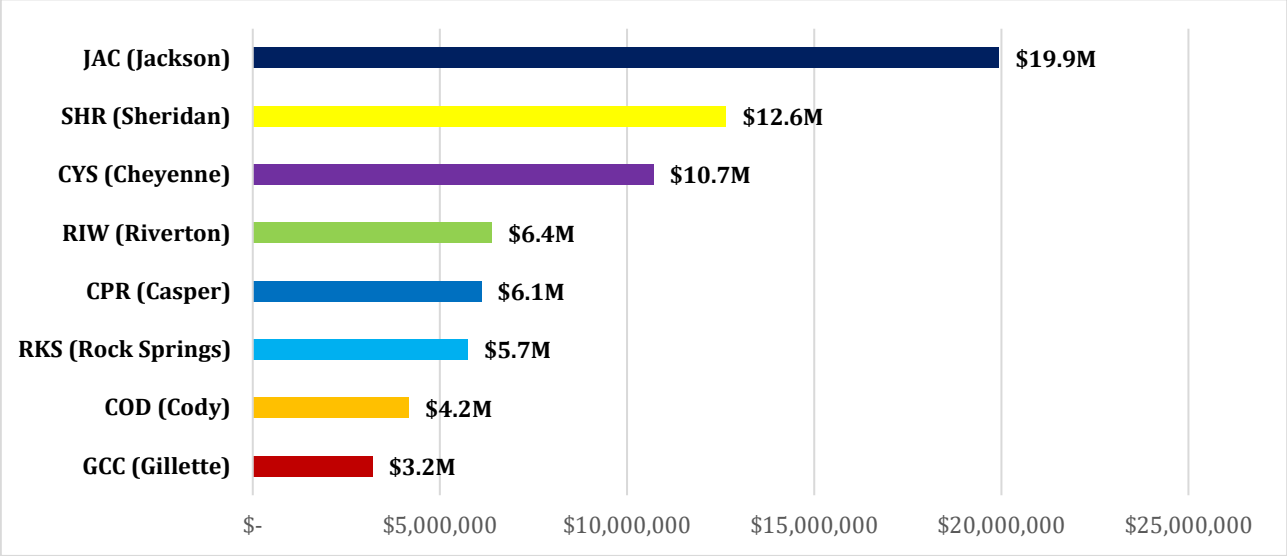


Figure 9: Average Direct Visitor Spending Per ASEP Route by Airport

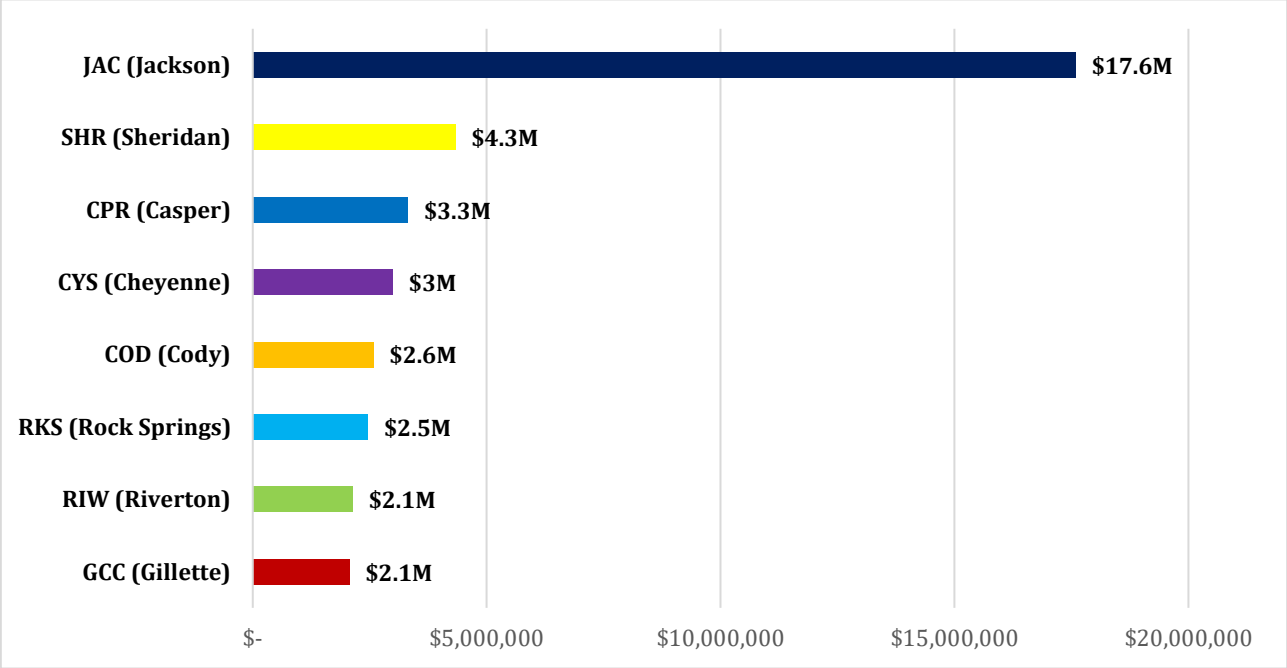


Figure 10: Average Direct Jobs Supported Per ASEP Route by Airport

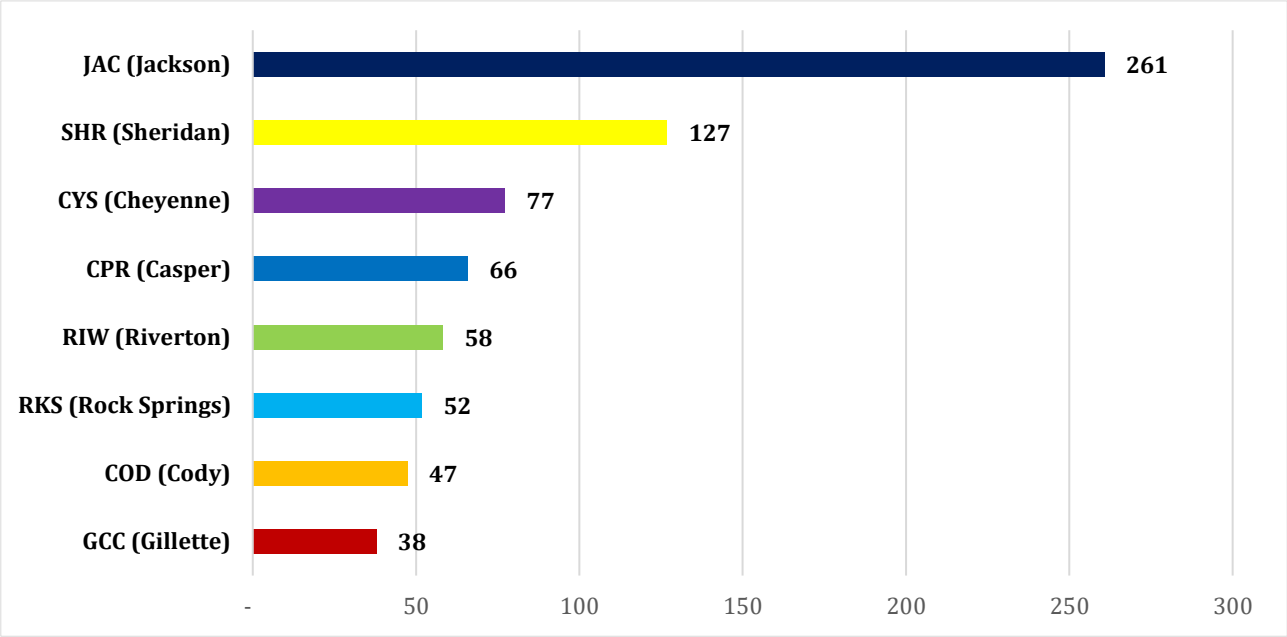


Figure 11: Average State Tax Revenue Generated Per ASEP Route by Airport

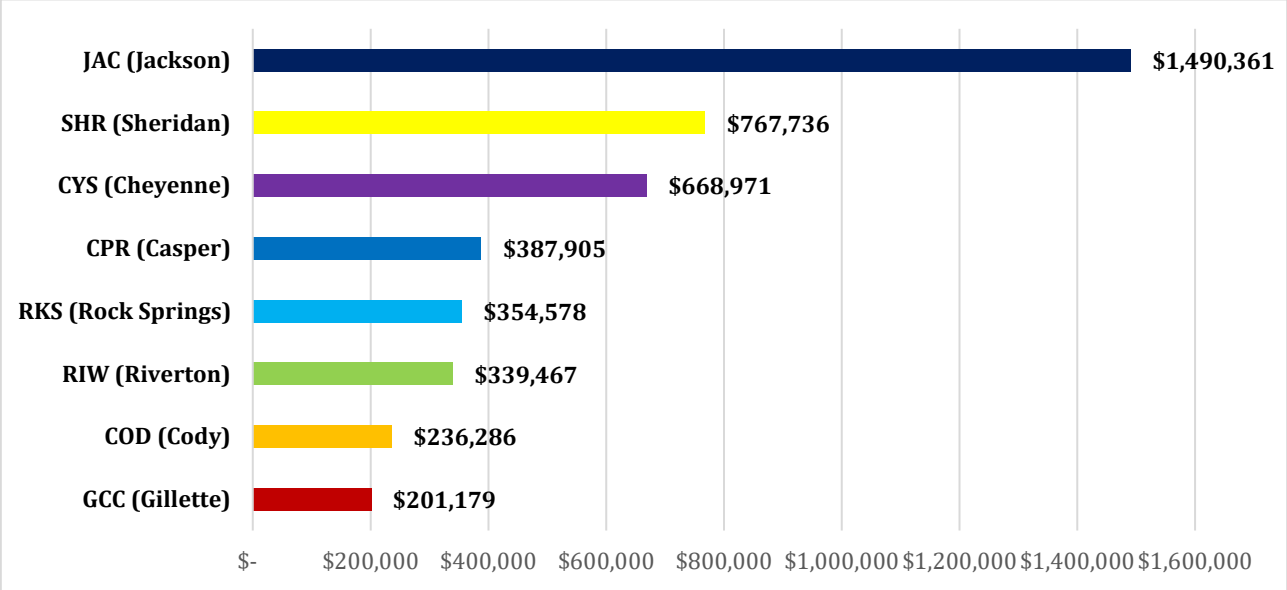


Figure 12: Average Direct Output Per Dollar of ASEP Investment by Airport

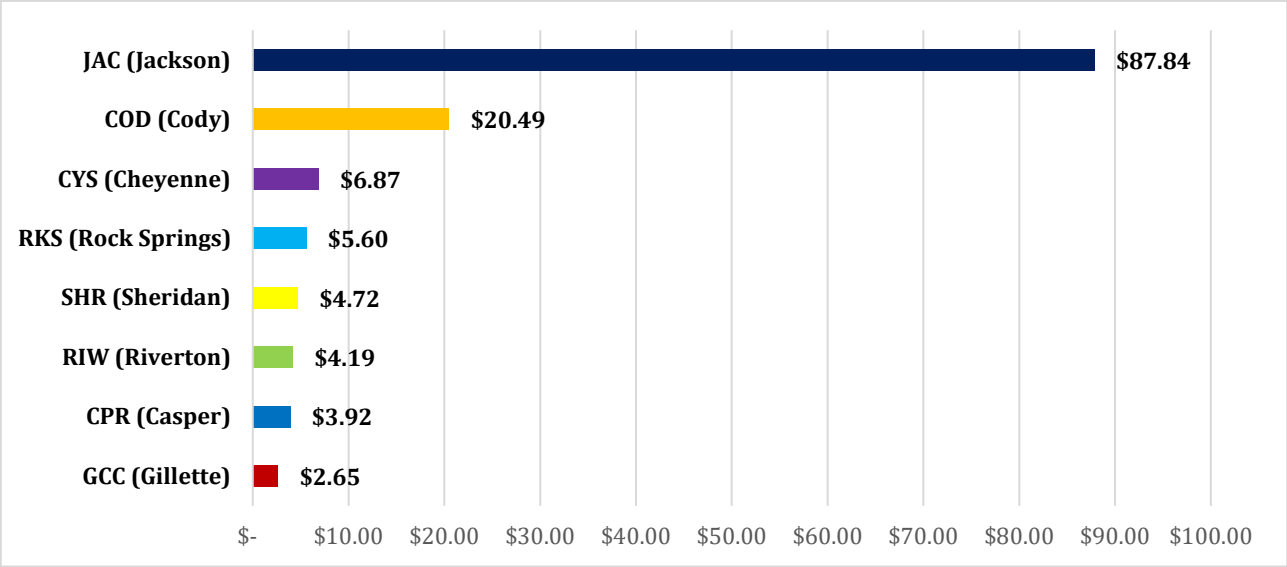


Figure 13: Average Direct ROI Per ASEP Route by Airport

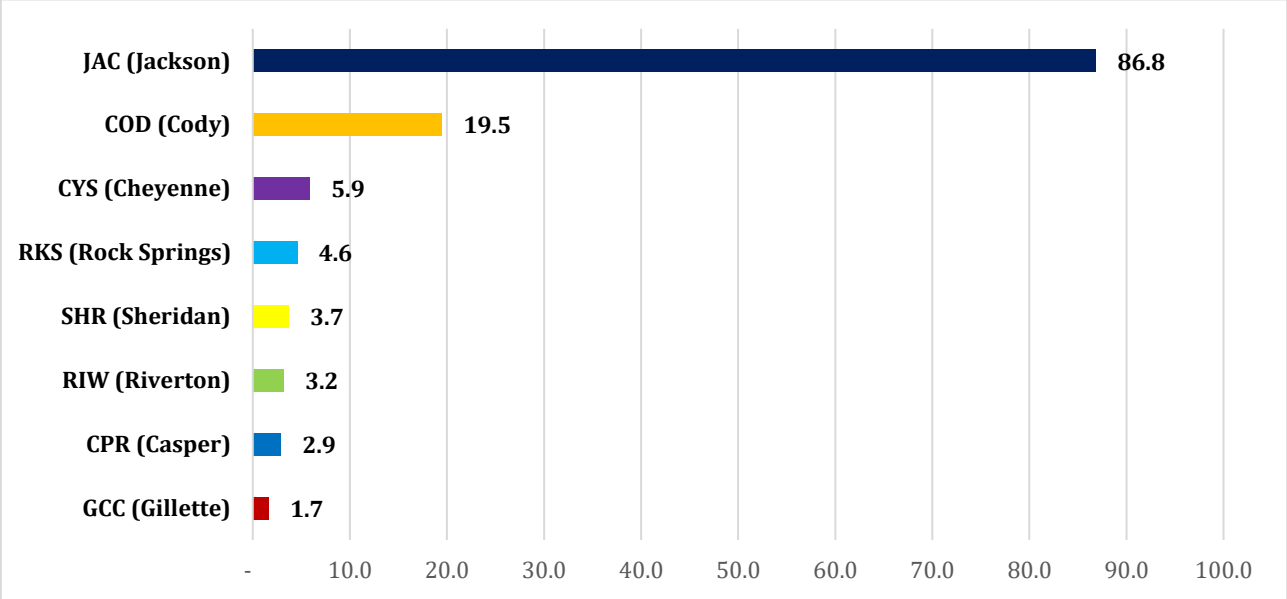


Table 9 Direct Output Summary by ASEP Route

Project ID	Project	Start	End	Route	ASEP Investment	Route Enplanements	Route Visitors	Direct Output	Direct ROI	State and Local Sales Taxes
Projects from 2016 Study										
1	WBC01	6/1/04	9/30/04	COD-DEN	$265,266	7,776	5,272	$6,141,738	22.15	$347,419
2	ASE01	10/4/04	9/30/05	CPR-MSP	$2,643,245	18,268	7,910	$10,344,767	2.91	$656,895
3	ASE06	10/6/04	6/6/05	COD-DEN	$311,553	5,502	3,730	$4,345,659	12.95	$245,820
4	CASE03	12/1/04	8/31/05	RIW-DEN	$225,041	3,770	2,138	$3,912,392	16.39	$207,792
5	ASE03	12/1/04	8/31/05	RKS-DEN	$172,944	837	347	$502,388	1.90	$30,986
6	ASE02	12/16/04	4/2/05	JAC-DFW	$137,450	7,489	6,717	$14,626,800	105.42	$1,093,299
7	ASE02	12/16/04	4/2/05	JAC-ORD	$189,812	14,500	13,007	$28,321,906	148.21	$2,116,957
8	ASE04	5/1/05	10/31/05	GCC-DEN	$212,035	7,936	3,214	$3,289,098	14.51	$206,729
9	ASE07	7/6/05	9/30/05	COD-DEN	$187,194	8,111	5,499	$6,406,332	33.22	$362,386
10	AERE807	10/3/05	6/11/06	COD-DEN	$233,338	6,105	4,139	$4,821,928	19.67	$272,761
11	AERE505	12/15/05	4/3/06	JAC-DFW	$118,593	12,089	10,844	$23,612,657	198.11	$1,764,958
12	AERE505	12/15/05	4/3/06	JAC-ORD	$135,035	15,691	14,075	$30,648,209	225.96	$2,290,839
13	ASE09	6/7/06	9/30/06	COD-DEN	$0	7,470	5,065	$5,900,050	N/A	$333,747
14	ASE11	10/1/06	6/7/07	COD-DEN	$68,222	5,846	3,964	$4,617,361	66.68	$261,189
15	ASE10	12/14/06	4/9/07	JAC-DFW	$138,021	13,318	11,946	$26,013,183	187.47	$1,944,388
16	ASE10	12/14/06	4/9/07	JAC-ORD	$152,548	16,262	14,587	$31,763,506	207.22	$2,374,203
17	ASE13	6/7/07	9/30/07	COD-SLC	$134,135	2,088	1,416	$1,649,170	11.29	$93,288
18	ASE14	10/1/07	5/31/08	COD-DEN	$275,155	5,067	3,435	$4,002,082	13.54	$226,385
19	ASE15	12/16/07	4/6/08	JAC-DFW	$221,574	11,283	10,121	$22,038,350	98.46	$1,647,284
20	ASE15	12/16/07	4/6/08	JAC-ORD	$253,397	14,799	13,275	$28,905,924	113.07	$2,160,610
21	ASE22	6/6/08	10/25/08	CPR-ORD	$474,972	3,307	1,432	$1,872,681	2.94	$118,916
22	ARASE21	7/1/08	6/30/09	RKS-SLC	$1,053,202	7,003	2,906	$4,203,369	2.99	$259,250
23	ARASE20	7/6/08	6/30/09	GCC-SLC	$1,182,013	5,979	2,421	$2,478,014	1.10	$155,750
24	ASE25	10/1/08	5/31/09	COD-DEN	$476,667	5,277	3,578	$4,167,947	7.74	$235,767
25	ASE26	10/1/08	5/31/09	COD-SLC	$357,501	11,102	7,527	$8,768,722	23.53	$496,019
26	ASE23	12/18/08	3/31/09	JAC-DFW	$239,287	12,500	11,213	$24,415,437	101.03	$1,824,963
27	ASE23	12/18/08	4/6/09	JAC-ORD	$237,380	12,310	11,042	$24,044,322	100.29	$1,797,223
28	ARASE28	7/1/09	6/30/10	GCC-SLC	$1,149,133	7,998	3,239	$3,314,794	1.88	$208,345
29	ARASE29	7/1/09	12/31/09	RKS-SLC	$850,326	2,922	1,213	$1,753,855	1.06	$108,172
30	ARASE33	10/1/09	5/31/10	COD-DEN	$527,597	5,065	3,434	$4,000,502	6.58	$226,296
31	ARASE27	12/17/09	4/5/10	JAC-ORD	$233,784	12,119	10,871	$23,671,254	100.25	$1,769,338
32	ARASE27	12/18/09	4/5/10	JAC-DFW	$235,191	12,262	10,999	$23,950,567	100.83	$1,790,215
33	ARASE38	1/1/10	6/30/10	RKS-SLC	$876,589	2,533	1,051	$1,520,368	0.73	$93,771
34	ARASE43	7/1/10	6/30/11	RKS-SLC	$1,701,401	6,389	2,651	$3,834,831	1.25	$236,519
35	AMERAIR	7/1/10	6/30/11	CYS-DFW	$2,103,353	12,488	6,856	$13,503,515	5.42	$843,828
36	ARASE40	7/10/10	12/31/10	GCC-SLC	$933,328	4,323	1,751	$1,791,680	0.92	$112,612
37	ARASE37	10/1/10	5/31/11	COD-DEN	$332,413	7,425	5,034	$5,864,507	16.64	$331,736
38	ARASE35	12/19/10	3/30/11	JAC-DFW	$140,820	6,189	5,552	$12,088,571	84.84	$903,576
39	ARASE35	12/19/10	3/30/11	JAC-ORD	$200,148	12,815	11,495	$25,030,706	124.06	$1,870,952
40	ARASE44	1/1/11	6/30/11	GCC-SLC	$927,316	4,255	1,723	$1,763,497	0.90	$110,841
41	ARASE45	7/1/11	6/30/12	GCC-SLC	$1,685,280	9,197	3,725	$3,811,723	1.26	$239,578
42	ARASE42	7/1/11	6/30/12	CYS-DFW	$1,136,561	7,138	3,919	$7,718,457	5.79	$482,323
43	ARASE46	10/1/11	5/30/12	COD-DEN	$40,037	8,661	5,872	$6,840,740	169.86	$386,959
44	ARASE41	12/11/11	3/30/12	JAC-DFW	$422,199	13,570	12,172	$26,504,421	61.78	$1,981,107
45	ARASE48	1/1/12	12/31/12	RKS-SLC	$1,692,910	5,938	2,464	$3,564,130	1.11	$219,823
46	ASGCC01	7/1/12	6/30/13	GCC-SLC	$1,789,955	9,865	3,995	$4,088,577	1.28	$256,979
47	ASCOD01	10/1/12	5/31/13	COD-DEN	$213,459	7,477	5,069	$5,905,578	26.67	$334,060
48	ARASE47	12/1/12	4/30/13	JAC-EWR	$199,026	929	833	$1,814,555	8.12	$135,631
49	ASRKS01	1/1/13	12/31/14	RKS-SLC	$1,573,519	6,143	2,549	$3,687,176	1.34	$227,413
50	ASGCC02	7/1/13	6/30/14	GCC-SLC	$1,669,733	11,502	4,658	$4,767,037	1.85	$299,622
51	ASJAC01	12/19/13	4/30/14	JAC-EWR	$0	2,380	2,135	$4,648,699	N/A	$347,473
52	ASRKS02	1/1/14	6/30/14	RKS-SLC	$756,985	5,183	2,151	$3,110,961	3.11	$191,874
53	ASCOD02	6/28/14	7/17/14	COD-ORD	$18,108	420	285	$331,730	17.32	$18,765
54	ASGCC03	7/1/14	6/30/15	GCC-SLC	$977,689	7,451	3,018	$3,088,088	2.16	$194,095
55	ASRKS03	7/1/14	6/30/15	RKS-SLC	$669,880	5,807	2,410	$3,485,501	4.20	$214,974
56	ASJAC02	12/1/14	4/30/15	JAC-IAD	$320,101	1,738	1,559	$3,394,722	9.61	$253,743
57	ASJAC02	12/1/14	4/30/15	JAC-EWR	$0	6,679	5,991	$13,045,656	N/A	$975,114
58	ASRKS03	2/1/15	6/30/15	RKS-DEN	$1,451,381	6,800	2,822	$4,081,524	1.81	$251,735
59	ASGCC03	2/2/15	6/30/15	GCC-DEN	$1,036,044	8,872	3,593	$3,677,026	2.55	$231,112
60	ASCOD03	6/1/15	7/17/15	COD-ORD	$0	482	327	$380,699	N/A	$21,535
New Results for 2016 Study					$35,959,845	464,699	316,236	$561,849,636	14.62	$39,395,937

Table 9 (cont.) Direct Output Summary by ASEP Route

Project ID	Project	Start	End	Route	ASEP Investment	Route Enplanements	Route Visitors	Direct Output	Direct ROI	State and Local Sales Taxes
Projects since 2016 Study										
61	ASRKS04	7/1/15	6/30/16	RKS-DEN	$844,581	16,966	7,041	$10,183,401	11.06	$628,078
62	ASGCC04	7/1/15	6/30/17	GCC-SLC	$1,704,330	7,574	3,067	$3,139,066	0.84	$197,300
63	CSSHR01	11/19/15	6/30/17	SHR-DEN	$4,237,246	14,330	8,340	$13,589,151	2.21	$824,774
64	ASJAC03	12/17/15	4/3/16	JAC-EWR	$309,196	6,675	5,987	$13,037,843	41.17	$974,530
65	ASJAC03	12/19/15	3/17/16	JAC-IAD	$309,195	1,477	1,325	$2,884,928	8.33	$215,638
66	ASCOD04	6/19/16	8/15/16	COD-ORD	$139,995	893	605	$705,321	4.04	$39,898
67	ASRIW01	7/1/16	6/30/17	RIW-DEN	$2,085,704	3,579	2,029	$3,714,178	0.78	$197,265
68	ASRKS05	7/1/16	6/30/17	RKS-DEN	$775,956	16,171	6,711	$9,706,223	11.51	$598,647
69	ASJAC05	12/16/16	4/3/17	JAC-EWR	$245,541	7,065	6,337	$13,799,605	55.20	$1,031,469
70	ASCOD05	6/11/17	8/13/17	COD-ORD	$88,299	428	290	$338,048	2.83	$19,122
71	CSSHR02	7/1/17	6/30/18	SHR-DEN	$1,763,271	10,536	6,132	$9,991,297	4.67	$606,407
72	ASRIW02	7/1/17	6/30/18	RIW-DEN	$1,763,271	5,474	3,104	$5,680,752	2.22	$301,712
73	ASRKS06	7/1/17	6/30/18	RKS-DEN	$773,033	21,125	8,767	$12,679,733	15.40	$782,043
74	ASJAC06	12/20/17	4/8/18	JAC-EWR	$438,988	8,809	7,902	$17,206,046	38.19	$1,286,088
75	CSSHR03	7/1/18	1/11/20	SHR-DEN	$2,033,656	15,151	8,818	$14,367,705	6.06	$872,027
76	ASRIW03	7/1/18	1/11/20	RIW-DEN	$2,033,656	11,813	6,698	$12,259,174	5.03	$651,100
77	ASRKS07	7/1/18	9/30/19	RKS-DEN	$1,192,522	30,276	12,565	$18,172,383	14.24	$1,120,811
78	ASCYS01	11/4/18	10/30/19	CYS-DFW	$2,200,000	15,451	8,483	$16,707,463	6.59	$1,044,041
79	ASJAC07	12/19/18	4/2/19	JAC-DFW	$450,000	18,396	16,501	$35,931,710	78.85	$2,685,761
80	ASJAC08	12/18/19	3/5/20	JAC-DFW	$347,418	13,861	12,433	$27,073,789	76.93	$2,023,665
81	ASCYS02	11/1/19	10/30/20	CYS-DFW	$790,477	4,524	2,484	$4,891,888	5.19	$305,692
Results for New Projects					$24,526,336	230,574	135,619	$246,059,705	9.03	$16,406,065
Results for 2016 and New Projects Combined					$60,486,181	695,273	451,856	$807,909,342	12.36	$55,802,003
Note: All financial figures adjusted to 2019 dollars.										

Table 10 Direct Output Build-up by ASEP Route

Project ID	Project	Start	End	Route	ASEP Investment	Direct Output	Airport Management Payroll & Spending		Airport Tenant Payroll & Spending		CIP-related Payroll & Spending		Visitor Spending	
Projects from 2016 Study							Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
1	WBC01	6/1/2004	9/30/2004	COD-DEN	$265,266	$6,141,738	$129,147	2%	$1,742,696	28%	$475,766	8%	$3,794,130	62%
2	ASE01	10/4/2004	9/30/2005	CPR-MSP	$2,643,245	$10,344,767	$681,633	7%	$3,027,574	29%	$1,023,284	10%	$5,612,276	54%
3	ASE06	10/6/2004	6/6/2005	COD-DEN	$311,553	$4,345,659	$91,380	2%	$1,233,065	28%	$336,634	8%	$2,684,581	62%
4	CASE03	12/1/2004	8/31/2005	RIW-DEN	$225,041	$3,912,392	$316,628	8%	$1,091,823	28%	$1,199,007	31%	$1,304,934	33%
5	ASE03	12/1/2004	8/31/2005	RKS-DEN	$172,944	$502,388	$98,394	20%	$83,449	17%	$105,350	21%	$215,194	43%
6	ASE02	12/16/2004	4/2/2005	JAC-DFW	$137,450	$14,626,800	$478,498	3%	$1,045,007	7%	$206,125	1%	$12,897,170	88%
7	ASE02	12/16/2004	4/2/2005	JAC-ORD	$189,812	$28,321,906	$926,517	3%	$2,023,449	7%	$399,120	1%	$24,972,821	88%
8	ASE04	5/1/2005	10/31/2005	GCC-DEN	$212,035	$3,289,098	$283,943	9%	$566,177	17%	$318,134	10%	$2,120,843	64%
9	ASE07	7/6/2005	9/30/2005	COD-DEN	$187,194	$6,406,332	$134,711	2%	$1,817,773	28%	$496,263	8%	$3,957,586	62%
10	AERE807	10/3/2005	6/11/2006	COD-DEN	$233,338	$4,821,928	$101,395	2%	$1,368,204	28%	$373,528	8%	$2,978,802	62%
11	AERE505	12/15/2005	4/3/2006	JAC-DFW	$118,593	$23,612,657	$772,459	3%	$1,686,999	7%	$332,756	1%	$20,820,443	88%
12	AERE505	12/15/2005	4/3/2006	JAC-ORD	$135,035	$30,648,209	$1,002,619	3%	$2,189,651	7%	$431,902	1%	$27,024,037	88%
13	ASE09	6/7/2006	9/30/2006	COD-DEN	$0	$5,900,050	$124,065	2%	$1,674,117	28%	$457,044	8%	$3,644,824	62%
14	ASE11	10/1/2006	6/7/2007	COD-DEN	$68,222	$4,617,361	$97,093	2%	$1,310,159	28%	$357,681	8%	$2,852,428	62%
15	ASE10	12/14/2006	4/9/2007	JAC-DFW	$138,021	$26,013,183	$850,990	3%	$1,858,503	7%	$366,584	1%	$22,937,105	88%
16	ASE10	12/14/2006	4/9/2007	JAC-ORD	$152,548	$31,763,506	$1,039,104	3%	$2,269,333	7%	$447,620	1%	$28,007,449	88%
17	ASE13	6/7/2007	9/30/2007	COD-SLC	$134,135	$1,649,170	$34,678	2%	$467,946	28%	$127,752	8%	$1,018,794	62%
18	ASE14	10/1/2007	5/31/2008	COD-DEN	$275,155	$4,002,082	$84,155	2%	$1,135,576	28%	$310,019	8%	$2,472,332	62%
19	ASE15	12/16/2007	4/6/2008	JAC-DFW	$221,574	$22,038,350	$720,958	3%	$1,574,523	7%	$310,570	1%	$19,432,299	88%
20	ASE15	12/16/2007	4/6/2008	JAC-ORD	$253,397	$28,905,924	$945,622	3%	$2,065,174	7%	$407,350	1%	$25,487,777	88%
21	ASE22	6/6/2008	10/25/2008	CPR-ORD	$474,972	$1,872,681	$123,394	7%	$548,073	29%	$185,242	10%	$1,015,973	54%
22	ARASE21	7/1/2008	6/30/2009	RKS-SLC	$1,053,202	$4,203,369	$823,243	20%	$698,198	17%	$881,444	21%	$1,800,484	43%
23	ARASE20	7/6/2008	6/30/2009	GCC-SLC	$1,182,013	$2,478,014	$213,924	9%	$426,559	17%	$239,683	10%	$1,597,848	64%
24	ASE25	10/1/2008	5/31/2009	COD-DEN	$476,667	$4,167,947	$87,643	2%	$1,182,639	28%	$322,867	8%	$2,574,797	62%
25	ASE26	10/1/2008	5/31/2009	COD-SLC	$357,501	$8,768,722	$184,387	2%	$2,488,092	28%	$679,264	8%	$5,416,979	62%
26	ASE23	12/18/2008	3/31/2009	JAC-DFW	$239,287	$24,415,437	$798,721	3%	$1,744,353	7%	$344,069	1%	$21,528,294	88%
27	ASE23	12/18/2008	4/6/2009	JAC-ORD	$237,380	$24,044,322	$786,581	3%	$1,717,839	7%	$338,839	1%	$21,201,064	88%
28	ARASE28	7/1/2009	6/30/2010	GCC-SLC	$1,149,133	$3,314,794	$286,162	9%	$570,600	17%	$320,620	10%	$2,137,412	64%
29	ARASE29	7/1/2009	12/31/2009	RKS-SLC	$850,326	$1,753,855	$343,498	20%	$291,323	17%	$367,782	21%	$751,251	43%
30	ARASE33	10/1/2009	5/31/2010	COD-DEN	$527,597	$4,000,502	$84,122	2%	$1,135,128	28%	$309,896	8%	$2,471,356	62%
31	ARASE27	12/17/2009	4/5/2010	JAC-ORD	$233,784	$23,671,254	$774,376	3%	$1,691,185	7%	$333,581	1%	$20,872,111	88%
32	ARASE27	12/18/2009	4/5/2010	JAC-DFW	$235,191	$23,950,567	$783,514	3%	$1,711,140	7%	$337,518	1%	$21,118,395	88%
33	ARASE38	1/1/2010	6/30/2010	RKS-SLC	$876,589	$1,520,368	$297,769	20%	$252,540	17%	$318,820	21%	$651,239	43%
34	ARASE43	7/1/2010	6/30/2011	RKS-SLC	$1,701,401	$3,834,831	$751,064	20%	$636,982	17%	$804,162	21%	$1,642,623	43%
35	AMERAIR	7/1/2010	6/30/2011	CYS-DFW	$2,103,353	$13,503,515	$3,498,574	26%	$2,646,154	20%	$3,585,191	27%	$3,773,596	28%
36	ARASE40	7/10/2010	12/31/2010	GCC-SLC	$933,328	$1,791,680	$154,673	9%	$308,415	17%	$173,298	10%	$1,155,293	64%
37	ARASE37	10/1/2010	5/31/2011	COD-DEN	$332,413	$5,864,507	$123,318	2%	$1,664,032	28%	$454,290	8%	$3,622,867	62%
38	ARASE35	12/19/2010	3/30/2011	JAC-DFW	$140,820	$12,088,571	$395,463	3%	$863,664	7%	$170,355	1%	$10,659,089	88%
39	ARASE35	12/19/2010	3/30/2011	JAC-ORD	$200,148	$25,030,706	$818,849	3%	$1,788,311	7%	$352,739	1%	$22,070,807	88%
40	ARASE44	1/1/2011	6/30/2011	GCC-SLC	$927,316	$1,763,497	$152,240	9%	$303,564	17%	$170,572	10%	$1,137,120	64%
41	ARASE45	7/1/2011	6/30/2012	GCC-SLC	$1,685,280	$3,811,723	$329,061	9%	$656,140	17%	$368,685	10%	$2,457,837	64%
42	ARASE42	7/1/2011	6/30/2012	CYS-DFW	$1,136,561	$7,718,457	$1,999,745	26%	$1,512,512	20%	$2,049,255	27%	$2,156,945	28%
43	ARASE46	10/1/2011	5/30/2012	COD-DEN	$40,037	$6,840,740	$143,846	2%	$1,941,035	28%	$529,914	8%	$4,225,946	62%
44	ARASE41	12/11/2011	3/30/2012	JAC-DFW	$422,199	$26,504,421	$867,060	3%	$1,893,600	7%	$373,507	1%	$23,370,255	88%
45	ARASE48	1/1/2012	12/31/2012	RKS-SLC	$1,692,910	$3,564,130	$698,046	20%	$592,018	17%	$747,396	21%	$1,526,670	43%
46	ASGCC01	7/1/2012	6/30/2013	GCC-SLC	$1,789,955	$4,088,577	$352,961	9%	$703,797	17%	$395,463	10%	$2,636,355	64%
47	ASCOD01	10/1/2012	5/31/2013	COD-DEN	$213,459	$5,905,578	$124,181	2%	$1,675,686	28%	$457,472	8%	$3,648,239	62%
48	ARASE47	12/1/2012	4/30/2013	JAC-EWR	$199,026	$1,814,555	$59,361	3%	$129,640	7%	$25,571	1%	$1,599,983	88%
49	ASRKS01	1/1/2013	12/31/2014	RKS-SLC	$1,573,519	$3,687,176	$722,145	20%	$612,456	17%	$773,198	21%	$1,579,376	43%
50	ASGCC02	7/1/2013	6/30/2014	GCC-SLC	$1,669,733	$4,767,037	$411,532	9%	$820,586	17%	$461,086	10%	$3,073,833	64%
51	ASJAC01	12/19/2013	4/30/2014	JAC-EWR	$0	$4,648,699	$152,077	3%	$332,125	7%	$65,511	1%	$4,098,987	88%
52	ASRKS02	1/1/2014	6/30/2014	RKS-SLC	$756,985	$3,110,961	$609,292	20%	$516,744	17%	$652,367	21%	$1,332,559	43%
53	ASCOD02	6/28/2014	7/17/2014	COD-ORD	$18,108	$331,730	$6,976	2%	$94,127	28%	$25,697	8%	$204,930	62%
54	ASGCC03	7/1/2014	6/30/2015	GCC-SLC	$977,689	$3,088,088	$266,590	9%	$531,576	17%	$298,692	10%	$1,991,230	64%
55	ASRKS03	7/1/2014	6/30/2015	RKS-SLC	$669,880	$3,485,501	$682,647	20%	$578,957	17%	$730,907	21%	$1,492,990	43%
56	ASJAC02	12/1/2014	4/30/2015	JAC-IAD	$320,101	$3,394,722	$111,054	3%	$242,535	7%	$47,839	1%	$2,993,294	88%
57	ASJAC02	12/1/2014	4/30/2015	JAC-EWR	$0	$13,045,656	$426,773	3%	$932,043	7%	$183,843	1%	$11,502,998	88%
58	ASRKS03	2/1/2015	6/30/2015	RKS-DEN	$1,451,381	$4,081,524	$799,379	20%	$677,959	17%	$855,893	21%	$1,748,292	43%
59	ASGCC03	2/2/2015	6/30/2015	GCC-DEN	$1,036,044	$3,677,026	$317,433	9%	$632,954	17%	$355,656	10%	$2,370,983	64%
60	ASCOD03	6/1/2015	7/17/2015	COD-ORD	$0	$380,699	$8,005	2%	$108,022	28%	$29,491	8%	$235,181	62%
New Results for 2016 Study					**$35,959,845**	**$561,849,636**	**$29,483,666**	5%	**$68,084,504**	12%	**$28,600,162**	5%	**$435,681,305**	78%

Table 10 (cont.) Direct Output Build-up by ASEP Route

Project ID	Project	Start	End	Route	ASEP Investment	Direct Output	Airport Management Payroll & Spending		Airport Tenant Payroll & Spending		CIP-related Payroll & Spending		Visitor Spending	
Projects since 2016 Study							Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
61	ASRKS04	7/1/15	6/30/16	RKS-DEN	$844,581	$10,183,401	$1,994,452	20%	$1,691,508	17%	$2,135,453	21%	$4,361,989	43%
62	ASGCC04	7/1/15	6/30/17	GCC-SLC	$1,704,330	$3,139,066	$270,991	9%	$540,351	17%	$303,623	10%	$2,024,101	64%
63	CSSHR01	11/19/15	6/30/17	SHR-DEN	$4,237,246	$13,589,151	$3,284,272	24%	$4,256,122	31%	$1,397,363	10%	$4,651,393	34%
64	ASJAC03	12/17/15	4/3/16	JAC-EWR	$309,196	$13,037,843	$426,517	3%	$931,484	7%	$183,733	1%	$11,496,109	88%
65	ASJAC03	12/19/15	3/17/16	JAC-IAD	$309,195	$2,884,928	$94,377	3%	$206,113	7%	$40,655	1%	$2,543,783	88%
66	ASCOD04	6/19/16	8/15/16	COD-ORD	$139,995	$705,321	$14,831	2%	$200,132	28%	$54,637	8%	$435,720	62%
67	ASRIW01	7/1/16	6/30/17	RIW-DEN	$2,085,704	$3,714,178	$300,586	8%	$1,036,508	28%	$1,138,261	31%	$1,238,822	33%
68	ASRKS05	7/1/16	6/30/17	RKS-DEN	$775,956	$9,706,223	$1,900,995	20%	$1,612,247	17%	$2,035,389	21%	$4,157,593	43%
69	ASJAC05	12/16/16	4/3/17	JAC-EWR	$245,541	$13,799,605	$451,437	3%	$985,908	7%	$194,468	1%	$12,167,792	88%
70	ASCOD05	6/11/17	8/13/17	COD-ORD	$88,299	$338,048	$7,108	2%	$95,920	28%	$26,187	8%	$208,833	62%
71	CSSHR02	7/1/17	6/30/18	SHR-DEN	$1,763,271	$9,991,297	$2,414,731	24%	$3,129,274	31%	$1,027,398	10%	$3,419,894	34%
72	ASRIW02	7/1/17	6/30/18	RIW-DEN	$1,763,271	$5,680,752	$459,740	8%	$1,585,316	28%	$1,740,945	31%	$1,894,751	33%
73	ASRKS06	7/1/17	6/30/18	RKS-DEN	$773,033	$12,679,733	$2,483,366	20%	$2,106,160	17%	$2,658,932	21%	$5,431,275	43%
74	ASJAC06	12/20/17	4/8/18	JAC-EWR	$438,988	$17,206,046	$562,875	3%	$1,229,280	7%	$242,472	1%	$15,171,419	88%
75	CSSHR03	7/1/18	1/11/20	SHR-DEN	$2,033,656	$14,367,705	$3,472,436	24%	$4,499,966	31%	$1,477,421	10%	$4,917,883	34%
76	ASRIW03	7/1/18	1/11/20	RIW-DEN	$2,033,656	$12,259,174	$992,128	8%	$3,421,143	28%	$3,756,994	31%	$4,088,910	33%
77	ASRKS07	7/1/18	9/30/19	RKS-DEN	$1,192,522	$18,172,383	$3,559,119	20%	$3,018,513	17%	$3,810,737	21%	$7,784,014	43%
78	ASCYS01	11/4/18	10/30/19	CYS-DFW	$2,200,000	$16,707,463	$4,328,672	26%	$3,274,002	20%	$4,435,841	27%	$4,668,948	28%
79	ASJAC07	12/19/18	4/2/19	JAC-DFW	$450,000	$35,931,710	$1,175,462	3%	$2,567,129	7%	$506,359	1%	$31,682,759	88%
80	ASJAC08	12/18/19	3/5/20	JAC-DFW	$347,418	$27,073,789	$885,686	3%	$1,934,278	7%	$381,531	1%	$23,872,294	88%
81	ASCYS02	11/1/19	10/30/20	CYS-DFW	$790,477	$4,891,888	$1,267,420	26%	$958,616	20%	$1,298,799	27%	$1,367,052	28%
Results for New Projects					$24,526,336	$246,059,705	$30,347,203	12%	$39,279,971	16%	$28,847,196	12%	$147,585,335	60%
Results for 2016 and New Projects Combined					$60,486,181	$807,909,342	$59,830,869	7%	$107,364,474	13%	$57,447,358	7%	$583,266,640	72%
Note: All financial figures adjusted to 2019 dollars.														

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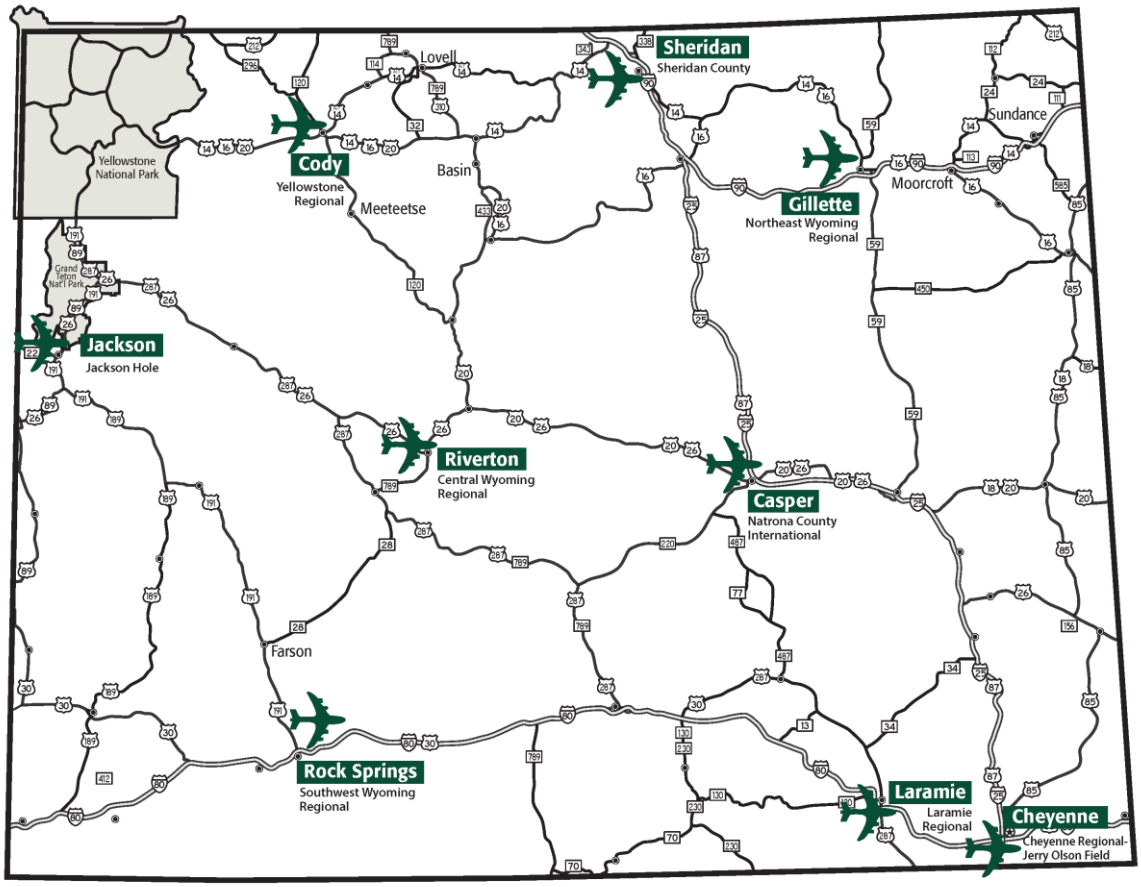
WYOMING AIR SERVICE ENHANCEMENT PROGRAM
RETURN ON INVESTMENT ANALYSIS - 2020 UPDATE

ADDENDUM
TOTAL ECONOMIC IMPACT INCLUDING MULTIPLIER EFFECTS



Mead & Hunt, Inc. in conjunction with Jviation, Inc.

TOTAL ROI ON ASEP INCLUDING MULTIPLIER EFFECTS

Mead & Hunt, Inc. in conjunction with Jviation, updated the Wyoming Department of Transportation's (WYDOT) 2016 Air Service Enhancement Program (ASEP) return on investment (ROI) study to evaluate the economic impact of each route supported through revenue guarantees by the Wyoming ASEP from 2004 to the first quarter of 2020.

The primary study focuses solely on the direct economic impact of ASEP routes. This includes the off-airport spending of visitors to the region as well as the direct impacts of employment, payroll, and spending for on-airport activities including management, tenants, and capital projects.

As noted in the 2020 WYDOT Economic Impact of Commercial Airline Activities report, the direct economic impacts associated with commercial airline functions support additional economic activities by contributing new revenues and income to businesses and workers throughout Wyoming, who in turn support other businesses and workers. These successive waves of economic activity are often referred to as multiplier impacts. Multiplier impacts are reported as indirect/induced impacts. The sum of direct and indirect/induced impacts equals the total economic impact of commercial airport activities.

These additional multiplier impacts also apply to the ASEP economic activity. While the primary ASEP ROI report is focused on just the direct impacts, it is also important to understand the total economic impacts the ASEP routes generated when including multiplier impacts.

This addendum highlights the addition of multiplier effects in the total economic impacts. Once the indirect and induced multiplier effects are included, the $60.5 million invested in the 81 ASEP routes evaluated over the 17-year period have:

- Produced a **total economic output** including indirect and induced multiplier effects of just over **$1.2 billion**
- Produced an **average ROI of 18.89** for every dollar invested. That equates to almost $20 of economic output for every $1 invested by the state and local communities.
- The 451,000 incremental visitors to the state produced over **$840 million in incremental visitor spending.**

The total economic output summarized by ASEP airport is shown in table ES-1a below.

Table ES-1a ASEP Program Total ROI by Airport

Airport	ASEP Investment (State and Local)	Total Economic Output	Total ROI
Cody - Yellowstone Regional Airport	$ 3,668,938	$ 111,226,189	29.32
Casper - Natrona County International Airport	$ 3,118,217	$ 18,644,491	4.98
Cheyenne Regional Airport - Jerry Olson Field	$ 6,230,391	$ 68,648,962	10.02
Gillette - Northeast Wyoming Regional Airport	$ 13,266,856	$ 53,353,876	3.02
Jackson Hole Airport	$ 5,674,705	$ 723,478,131	126.49
Riverton - Central Wyoming Regional Airport	$ 6,107,672	$ 39,209,182	5.42
Rock Springs - SW Wyoming Regional Airport	$ 14,385,228	$ 126,528,445	7.80
Sheridan County Airport	$ 8,034,173	$ 61,815,223	6.69
Total	**$ 60,486,181**	**$ 1,202,904,499**	**18.89**
Total excluding Jackson Hole	**$ 54,811,476**	**$ 479,426,368**	**8.75**

When including the indirect and induced multiplier effects, the total economic output associated with the ASEP routes grows from $807 million in direct economic output to over $1.2 billion in total economic output. This increases the ROI attributable to ASEP routes from 12.36 when including only direct economic output to 18.89 when including total economic output. Even if excluding the significantly higher ROIs from Jackson Hole Airport, the program ROI remains a very healthy 8.75. Regardless of whether direct economic impacts or total economic impacts are considered, the WYDOT ASEP has generated a positive return on investment.

Both the on-airport direct impacts and off-airport direct visitor spending drive indirect and induced economic impacts as employees and businesses spend their income on goods and services in their local economies. These multiplier effects are then added to the direct impacts to calculate the total economic impacts of ASEP routes.

Figure 1a: Multiplier Effects of Individual Routes

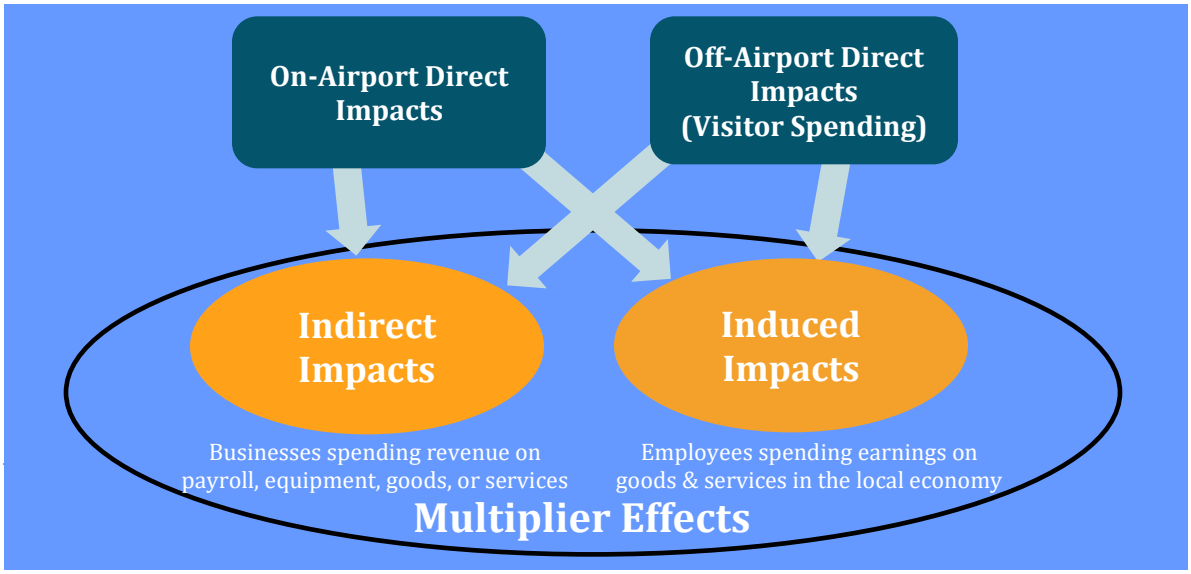


Figure 2a: Composition of Economic Impacts for Individual Routes

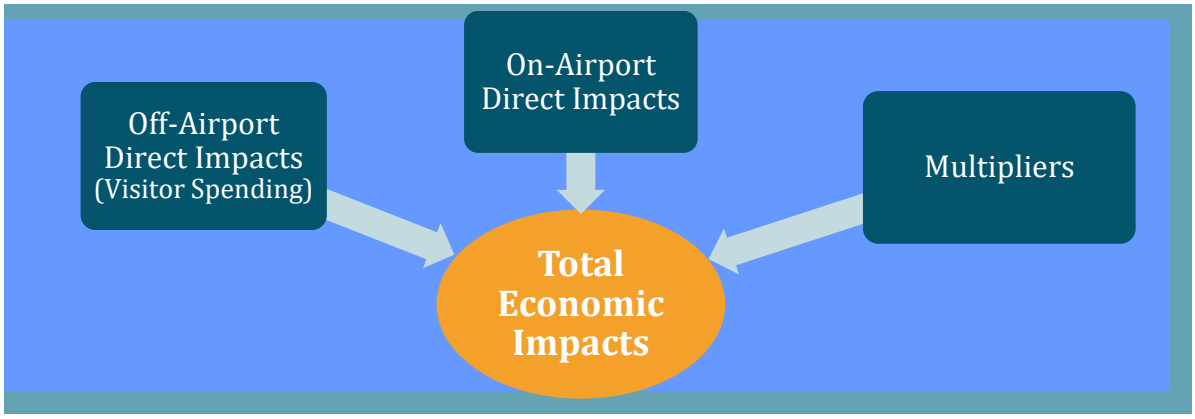


Table 3 in the primary ROI Update illustrates the composition of the direct economic impact of $807 million. Including the multiplier effects increases the total economic output to just over $1.2 billion, essentially a 50% increase over the direct output. The multiplier effects add $395 million to the total output. This is shown in **Table 3a** below. Airport Management output grows by almost $50 million. Business Tenant output grows by over $53 million. Total CIP output grows by over $34 million and visitor spending grows by over $257 million.

Table 3a Composition of Statewide Total Output including multipliers

	Airport Management Output	Business Tenant Output	CIP Output	Visitor Spending	Total Output
Direct Output	$59,830,869	$107,364,474	$57,447,358	$583,266,640	$807,909,342
Multiplier Effect	$49,864,433	$53,400,826	$34,499,613	$257,230,285	$394,995,157
Total Output	$109,695,303	$160,765,300	$91,946,971	$840,496,925	$1,202,904,499

A detailed breakdown of these impacts by ASEP route, year, and market supported is shown in **Table 9a.**

Table 9a Direct and Total Output Summary by ASEP Route

Project ID	Project	Start	End	Route	ASEP Investment	Route Enplanements	Route Visitors	Direct Output	Direct ROI	Total Output	Total ROI
Projects from 2016 Study											
1	WBC01	6/1/2004	9/30/2004	COD-DEN	$265,266	7,776	5,272	$6,141,738	22.15	$9,085,507	33.25
2	ASE01	10/4/2004	9/30/2005	CPR-MSP	$2,643,245	18,268	7,910	$10,344,767	2.91	$15,786,677	4.97
3	ASE06	10/6/2004	6/6/2005	COD-DEN	$311,553	5,502	3,730	$4,345,659	12.95	$6,428,557	19.63
4	CASE03	12/1/2004	8/31/2005	RIW-DEN	$225,041	3,770	2,138	$3,912,392	16.39	$6,000,106	25.66
5	ASE03	12/1/2004	8/31/2005	RKS-DEN	$172,944	837	347	$502,388	1.90	$789,783	3.57
6	ASE02	12/16/2004	4/2/2005	JAC-DFW	$137,450	7,489	6,717	$14,626,800	105.42	$21,229,158	153.45
7	ASE02	12/16/2004	4/2/2005	JAC-ORD	$189,812	14,500	13,007	$28,321,906	148.21	$41,106,068	215.56
8	ASE04	5/1/2005	10/31/2005	GCC-DEN	$212,035	7,936	3,214	$3,289,098	14.51	$4,984,184	22.51
9	ASE07	7/6/2005	9/30/2005	COD-DEN	$187,194	8,111	5,499	$6,406,332	33.22	$9,476,922	49.63
10	AERE807	10/3/2005	6/11/2006	COD-DEN	$233,338	6,105	4,139	$4,821,928	19.67	$7,133,105	29.57
11	AERE505	12/15/2005	4/3/2006	JAC-DFW	$118,593	12,089	10,844	$23,612,657	198.11	$34,271,121	287.98
12	AERE505	12/15/2005	4/3/2006	JAC-ORD	$135,035	15,691	14,075	$30,648,209	225.96	$44,482,435	328.41
13	ASE09	6/7/2006	9/30/2006	COD-DEN	$0	7,470	5,065	$5,900,050	N/A	$8,727,976	N/A
14	ASE11	10/1/2006	6/7/2007	COD-DEN	$68,222	5,846	3,964	$4,617,361	66.68	$6,830,488	99.12
15	ASE10	12/14/2006	4/9/2007	JAC-DFW	$138,021	13,318	11,946	$26,013,183	187.47	$37,755,214	272.55
16	ASE10	12/14/2006	4/9/2007	JAC-ORD	$152,548	16,262	14,587	$31,763,506	207.22	$46,101,164	301.21
17	ASE13	6/7/2007	9/30/2007	COD-SLC	$134,135	2,088	1,416	$1,649,170	11.29	$2,439,627	17.19
18	ASE14	10/1/2007	5/31/2008	COD-DEN	$275,155	5,067	3,435	$4,002,082	13.54	$5,920,301	20.52
19	ASE15	12/16/2007	4/6/2008	JAC-DFW	$221,574	11,283	10,121	$22,038,350	98.46	$31,986,190	143.36
20	ASE15	12/16/2007	4/6/2008	JAC-ORD	$253,397	14,799	13,275	$28,905,924	113.07	$41,953,703	164.56
21	ASE22	6/6/2008	10/25/2008	CPR-ORD	$474,972	3,307	1,432	$1,872,681	2.94	$2,857,814	5.02
22	ARASE21	7/1/2008	6/30/2009	RKS-SLC	$1,053,202	7,003	2,906	$4,203,369	2.99	$6,607,942	5.27
23	ARASE20	7/6/2008	6/30/2009	GCC-SLC	$1,182,013	5,979	2,421	$2,478,014	1.10	$3,755,095	2.18
24	ASE25	10/1/2008	5/31/2009	COD-DEN	$476,667	5,277	3,578	$4,167,947	7.74	$6,165,666	11.93
25	ASE26	10/1/2008	5/31/2009	COD-SLC	$357,501	11,102	7,527	$8,768,722	23.53	$12,971,618	35.28
26	ASE23	12/18/2008	3/31/2009	JAC-DFW	$239,287	12,500	11,213	$24,415,437	101.03	$35,436,265	147.09
27	ASE23	12/18/2008	4/6/2009	JAC-ORD	$237,380	12,310	11,042	$24,044,322	100.29	$34,897,634	146.01
28	ARASE28	7/1/2009	6/30/2010	GCC-SLC	$1,149,133	7,998	3,239	$3,314,794	1.88	$5,023,123	3.37
29	ARASE29	7/1/2009	12/31/2009	RKS-SLC	$850,326	2,922	1,213	$1,753,855	1.06	$2,757,162	2.24
30	ARASE33	10/1/2009	5/31/2010	COD-DEN	$527,597	5,065	3,434	$4,000,502	6.58	$5,917,965	10.22
31	ARASE27	12/17/2009	4/5/2010	JAC-ORD	$233,784	12,119	10,871	$23,671,254	100.25	$34,356,168	145.96
32	ARASE27	12/18/2009	4/5/2010	JAC-DFW	$235,191	12,262	10,999	$23,950,567	100.83	$34,761,559	146.80
33	ARASE38	1/1/2010	6/30/2010	RKS-SLC	$876,589	2,533	1,051	$1,520,368	0.73	$2,390,107	1.73
34	ARASE43	7/1/2010	6/30/2011	RKS-SLC	$1,701,401	6,389	2,651	$3,834,831	1.25	$6,028,579	2.54
35	AMERAIR	7/1/2010	6/30/2011	CYS-DFW	$2,103,353	12,488	6,856	$13,503,515	5.42	$21,648,146	9.29
36	ARASE40	7/10/2010	12/31/2010	GCC-SLC	$933,328	4,323	1,751	$1,791,680	0.92	$2,715,049	1.91
37	ARASE37	10/1/2010	5/31/2011	COD-DEN	$332,413	7,425	5,034	$5,864,507	16.64	$8,675,397	25.10
38	ARASE35	12/19/2010	3/30/2011	JAC-DFW	$140,820	6,189	5,552	$12,088,571	84.84	$17,545,204	123.59
39	ARASE35	12/19/2010	3/30/2011	JAC-ORD	$200,148	12,815	11,495	$25,030,706	124.06	$36,329,259	180.51
40	ARASE44	1/1/2011	6/30/2011	GCC-SLC	$927,316	4,255	1,723	$1,763,497	0.90	$2,672,341	1.88
41	ARASE45	7/1/2011	6/30/2012	GCC-SLC	$1,685,280	9,197	3,725	$3,811,723	1.26	$5,776,151	2.43
42	ARASE42	7/1/2011	6/30/2012	CYS-DFW	$1,136,561	7,138	3,919	$7,718,457	5.79	$12,373,836	9.89
43	ARASE46	10/1/2011	5/30/2012	COD-DEN	$40,037	8,661	5,872	$6,840,740	169.86	$10,119,544	251.76
44	ARASE41	12/11/2011	3/30/2012	JAC-DFW	$422,199	13,570	12,172	$26,504,421	61.78	$38,468,192	90.11
45	ARASE48	1/1/2012	12/31/2012	RKS-SLC	$1,692,910	5,938	2,464	$3,564,130	1.11	$5,603,021	2.31
46	ASGCC01	7/1/2012	6/30/2013	GCC-SLC	$1,789,955	9,865	3,995	$4,088,577	1.28	$6,195,687	2.46
47	ASCOD01	10/1/2012	5/31/2013	COD-DEN	$213,459	7,477	5,069	$5,905,578	26.67	$8,736,154	39.93
48	ARASE47	12/1/2012	4/30/2013	JAC-EWR	$199,026	929	833	$1,814,555	8.12	$2,633,623	12.23
49	ASRKS01	1/1/2013	12/31/2014	RKS-SLC	$1,573,519	6,143	2,549	$3,687,176	1.34	$5,796,456	2.68
50	ASGCC02	7/1/2013	6/30/2014	GCC-SLC	$1,669,733	11,502	4,658	$4,767,037	1.85	$7,223,800	3.33
51	ASJAC01	12/19/2013	4/30/2014	JAC-EWR	$0	2,380	2,135	$4,648,699	N/A	$6,747,065	N/A
52	ASRKS02	1/1/2014	6/30/2014	RKS-SLC	$756,985	5,183	2,151	$3,110,961	3.11	$4,890,613	5.46
53	ASCOD02	6/28/2014	7/17/2014	COD-ORD	$18,108	420	285	$331,730	17.32	$490,730	26.10
54	ASGCC03	7/1/2014	6/30/2015	GCC-SLC	$977,689	7,451	3,018	$3,088,088	2.16	$4,679,581	3.79
55	ASRKS03	7/1/2014	6/30/2015	RKS-SLC	$669,880	5,807	2,410	$3,485,501	4.20	$5,479,411	7.18
56	ASJAC02	12/1/2014	4/30/2015	JAC-IAD	$320,101	1,738	1,559	$3,394,722	9.61	$4,927,058	14.39
57	ASJAC02	12/1/2014	4/30/2015	JAC-EWR	$0	6,679	5,991	$13,045,656	N/A	$18,934,305	N/A
58	ASRKS03	2/1/2015	6/30/2015	RKS-DEN	$1,451,381	6,800	2,822	$4,081,524	1.81	$6,416,393	3.42
59	ASGCC03	2/2/2015	6/30/2015	GCC-DEN	$1,036,044	8,872	3,593	$3,677,026	2.55	$5,572,036	4.38
60	ASCOD03	6/1/2015	7/17/2015	COD-ORD	$0	482	327	$380,699	N/A	$563,171	N/A
New Results for 2016 Study					**$35,959,845**	**464,699**	**316,236**	**$561,849,636**	**14.62**	**$827,627,204**	22.02

Table 9a (cont.) Direct and Total Output Summary by ASEP Route

Project ID	Project	Start	End	Route	ASEP Investment	Route Enplanements	Route Visitors	Direct Output	Direct ROI	Total Output	Total ROI
Projects since 2016 Study											
61	ASRKS04	7/1/2015	6/30/2016	RKS-DEN	$844,581	16,966	7,041	$10,183,401	11.06	$16,008,901	17.95
62	ASGCC04	7/1/2015	6/30/2017	GCC-SLC	$1,704,330	7,574	3,067	$3,139,066	0.84	$4,756,830	1.79
63	CSSHR01	11/19/2015	6/30/2017	SHR-DEN	$4,237,246	14,330	8,340	$13,589,151	2.21	$22,135,896	4.22
64	ASJAC03	12/17/2015	4/3/2016	JAC-EWR	$309,196	6,675	5,987	$13,037,843	41.17	$18,922,966	60.20
65	ASJAC03	12/19/2015	3/17/2016	JAC-IAD	$309,195	1,477	1,325	$2,884,928	8.33	$4,187,149	12.54
66	ASCOD04	6/19/2016	8/15/2016	COD-ORD	$139,995	893	605	$705,321	4.04	$1,043,384	6.45
67	ASRIW01	7/1/2016	6/30/2017	RIW-DEN	$2,085,704	3,579	2,029	$3,714,178	0.78	$5,696,122	1.73
68	ASRKS05	7/1/2016	6/30/2017	RKS-DEN	$775,956	16,171	6,711	$9,706,223	11.51	$15,258,749	18.66
69	ASJAC05	12/16/2016	4/3/2017	JAC-EWR	$245,541	7,065	6,337	$13,799,605	55.20	$20,028,577	80.57
70	ASCOD05	6/11/2017	8/13/2017	COD-ORD	$88,299	428	290	$338,048	2.83	$500,077	4.66
71	CSSHR02	7/1/2017	6/30/2018	SHR-DEN	$1,763,271	10,536	6,132	$9,991,297	4.67	$16,275,213	8.23
72	ASRIW02	7/1/2017	6/30/2018	RIW-DEN	$1,763,271	5,474	3,104	$5,680,752	2.22	$8,712,091	3.94
73	ASRKS06	7/1/2017	6/30/2018	RKS-DEN	$773,033	21,125	8,767	$12,679,733	15.40	$19,933,281	24.79
74	ASJAC06	12/20/2017	4/8/2018	JAC-EWR	$438,988	8,809	7,902	$17,206,046	38.19	$24,972,645	55.89
75	CSSHR03	7/1/2018	1/11/2020	SHR-DEN	$2,033,656	15,151	8,818	$14,367,705	6.06	$23,404,114	10.51
76	ASRIW03	7/1/2018	1/11/2020	RIW-DEN	$2,033,656	11,813	6,698	$12,259,174	5.03	$18,800,863	8.24
77	ASRKS07	7/1/2018	9/30/2019	RKS-DEN	$1,192,522	30,276	12,565	$18,172,383	14.24	$28,568,048	22.96
78	ASCYS01	11/4/2018	10/30/2019	CYS-DFW	$2,200,000	15,451	8,483	$16,707,463	6.59	$26,784,554	11.17
79	ASJAC07	12/19/2018	4/2/2019	JAC-DFW	$450,000	18,396	16,501	$35,931,710	78.85	$52,150,843	114.89
80	ASJAC08	12/18/2019	3/5/2020	JAC-DFW	$347,418	13,861	12,433	$27,073,789	76.93	$39,294,566	112.10
81	ASCYS02	11/1/2019	10/30/2020	CYS-DFW	$790,477	4,524	2,484	$4,891,888	5.19	$7,842,426	8.92
Results for New Projects					**$24,526,336**	**230,574**	**135,619**	**$246,059,705**	**9.03**	**$375,277,294**	14.30
Results for 2016 Projects and New Projects Combined					**$60,486,181**	**695,273**	**451,856**	**$807,909,342**	**12.36**	**$1,202,904,499**	18.89
Note: All financial figures adjusted to 2019 dollars.											

Appendix C: Total Annual Economic Impact by Senate and House District

Senate Districts Total Annual Economic Impact

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
1	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Newcastle - Mondell Field	16	$571,800	$1,699,400	$2,271,200	$75,600
	Hulett Municipal Airport	3	$61,800	$145,100	$206,900	$7,130
	Annual Impacts All Assigned Airports	698	$26,221,600	$59,098,400	$85,320,000	$3,208,700
	Annual Impacts From Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
2	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Guernsey - Camp Guernsey Army Airfield	26	$1,441,900	$2,039,200	$3,481,100	$18,900
	Wheatland - Phifer Airfield	16	$573,600	$2,402,100	$2,975,700	$104,120
	Annual Impacts All Assigned Airports	3,857	$141,099,900	$256,552,700	$397,652,600	$9,365,410
	Annual Impacts From Commercial Airline Functions	*1,209*	*$40,786,900*	*$92,219,000*	*$133,005,900*	*$5,536,650*
3	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Torrington Municipal Airport	16	$783,000	$1,856,900	$2,639,900	$74,780
	Guernsey - Camp Guernsey Army Airfield	26	$1,441,900	$2,039,200	$3,481,100	$18,900
	Newcastle - Mondell Field	16	$571,800	$1,699,400	$2,271,200	$75,600
	Lusk Municipal Airport	3	$88,200	$319,700	$407,900	$13,820

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Annual Impacts All Assigned Airports	3,919	$142,416,700	$254,912,400	$397,329,100	$9,264,140
	Annual Impacts From Commercial Airline Functions	*1,218*	*$41,241,100*	*$89,454,800*	*$130,695,900*	*$5,363,340*
4	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
5	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
6	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Torrington Municipal Airport	16	$783,000	$1,856,900	$2,639,900	$74,780
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,620	$93,267,200	$154,184,200	$247,451,400	$3,852,380
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
7	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
8	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
9	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts From Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
10	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Annual Impacts All Assigned Airports	3,795	$138,366,900	$249,846,800	$388,213,700	$9,154,060
	Annual Impacts From Commercial Airline Functions	*1,209*	*$40,786,900*	*$92,219,000*	*$133,005,900*	*$5,536,650*
11	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Rawlins Municipal Airport - Harvey Field	22	$1,104,600	$2,014,300	$3,118,900	$98,830
	Saratoga - Shively Field	193	$5,868,100	$10,451,800	$16,319,900	$765,470
	Dixon Airport	0	$537,300	$1,441,000	$1,978,300	$64,730
	Annual Impacts All Assigned Airports	2,223	$84,153,500	$178,607,900	$262,761,400	$9,885,530
	Annual Impacts From Commercial Airline Functions	*1,314*	*$44,455,700*	*$95,275,700*	*$139,731,400*	*$5,752,530*
12	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts From Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
13	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts From Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100	$456,030
	Evanston - Uinta County Airport - Burns Field	30	$943,100	$2,470,400	$3,413,500	$121,880
14	Pinedale - Ralph Wenz Field	34	$1,437,600	$3,098,400	$4,536,000	$112,800
	Big Piney - Miley Memorial Field	8	$261,200	$530,200	$791,400	$16,700
	Fort Bridger Airport	5	$152,100	$528,400	$680,500	$17,680
	Kemmerer Municipal Airport	8	$276,900	$715,500	$992,400	$29,120
	Annual Impacts All Assigned Airports	16,285	$733,918,400	$684,041,400	$1,417,959,800	$70,835,350
	Annual Impacts From Commercial Airline Functions	*15,106*	*$677,833,300*	*$612,584,700*	*$1,290,418,000*	*$65,981,020*
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Evanston - Uinta County Airport - Burns Field	30	$943,100	$2,470,400	$3,413,500	$121,880
15	Fort Bridger Airport	5	$152,100	$528,400	$680,500	$17,680
	Annual Impacts All Assigned Airports	359	$12,458,400	$28,487,000	$40,945,400	$1,532,310
	Annual Impacts From Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
16	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100	$456,030
	Pinedale - Ralph Wenz Field	34	$1,437,600	$3,098,400	$4,536,000	$112,800
	Big Piney - Miley Memorial Field	8	$261,200	$530,200	$791,400	$16,700
	Kemmerer Municipal Airport	8	$276,900	$715,500	$992,400	$29,120

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Annual Impacts All Assigned Airports	16,075	$725,383,000	$667,147,600	$1,392,530,600	$70,034,780
	Annual Impacts From Commercial Airline Functions	*15,002*	*$674,012,300*	*$604,459,600*	*$1,278,471,900*	*$65,567,310*
17	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100	$456,030
	Dubois Municipal Airport	8	$283,700	$906,400	$1,190,100	$32,240
	Annual Impacts All Assigned Airports	16,395	$734,196,300	$682,067,800	$1,416,264,100	$70,929,340
	Annual Impacts From Commercial Airline Functions	*15,324*	*$683,223,000*	*$621,089,000*	*$1,304,312,000*	*$66,533,210*
18	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600	$49,520
	Annual Impacts All Assigned Airports	706	$22,678,700	$45,372,500	$68,051,200	$2,463,210
	Annual Impacts From Commercial Airline Functions	*505*	*$15,318,000*	*$32,843,600*	*$48,161,600*	*$1,841,640*
19	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Greybull - South Big Horn County Airport	32	$1,731,300	$2,280,400	$4,011,700	$87,830
	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600	$49,520
	Cowley - North Big Horn County Airport	6	$192,600	$799,100	$991,700	$26,760
	Annual Impacts All Assigned Airports	1,084	$38,536,800	$82,747,800	$121,284,600	$4,415,390
	Annual Impacts From Commercial Airline Functions	*648*	*$20,918,800*	*$42,833,700*	*$63,752,500*	*$2,422,550*
20	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Greybull - South Big Horn County Airport	32	$1,731,300	$2,280,400	$4,011,700	$87,830

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Worland Municipal Airport	46	$2,389,900	$5,821,200	$8,211,100	$241,570
	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600	$49,520
	Thermopolis - Hot Springs County Airport	18	$726,400	$1,805,300	$2,531,700	$78,950
	Annual Impacts All Assigned Airports	2,520	$95,534,400	$202,715,500	$298,249,900	$10,823,170
	Annual Impacts From Commercial Airline Functions	*1,584*	*$53,177,300*	*$106,724,400*	*$159,901,700*	*$6,340,010*
21	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Annual Impacts All Assigned Airports	1,381	$48,040,800	$103,154,000	$151,194,800	$5,638,600
	Annual Impacts From Commercial Airline Functions	*852*	*$27,462,900*	*$55,240,300*	*$82,703,200*	*$3,208,570*
22	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Annual Impacts All Assigned Airports	1,898	$72,806,000	$158,553,200	$231,359,200	$8,677,920
	Annual Impacts From Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
23	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Newcastle - Mondell Field	16	$571,800	$1,699,400	$2,271,200	$75,600
	Annual Impacts All Assigned Airports	1,934	$74,095,300	$162,517,200	$236,612,500	$8,841,850
	Annual Impacts From Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
24	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts From Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
25	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Lander - Hunt Field	46	$2,785,600	$5,416,300	$8,201,900	$208,710
	Dubois Municipal Airport	8	$283,700	$906,400	$1,190,100	$32,240
	Annual Impacts All Assigned Airports	16,160	$728,981,900	$671,439,000	$1,400,420,900	$70,322,090
	Annual Impacts From Commercial Airline Functions	*15,106*	*$677,833,300*	*$612,584,700*	*$1,290,418,000*	*$65,981,020*
26	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Lander - Hunt Field	46	$2,785,600	$5,416,300	$8,201,900	$208,710
	Dubois Municipal Airport	8	$283,700	$906,400	$1,190,100	$32,240
	Annual Impacts All Assigned Airports	17,363	$775,615,600	$770,684,300	$1,546,299,900	$75,775,100
	Annual Impacts From Commercial Airline Functions	*15,938*	*$706,270,800*	*$668,350,300*	*$1,374,621,100*	*$69,484,770*
27	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts From Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
28	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010

2020 Senate District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Annual Impacts From Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
29	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts From Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
30	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	1,718	$68,008,100	$147,436,100	$215,444,200	$7,951,610
	Annual Impacts From Commercial Airline Functions	*1,079*	*$37,859,300*	*$73,880,800*	*$111,740,100*	*$4,498,370*

House Districts Total Annual Economic Impact

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
1	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Newcastle - Mondell Field	16	$571,800	$1,699,400	$2,271,200	$75,600
	Hulett Municipal Airport	3	$61,800	$145,100	$206,900	$7,130
	Annual Impacts All Assigned Airports	698	$26,221,600	$59,098,400	$85,320,000	$3,208,700
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
2	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Torrington Municipal Airport	16	$783,000	$1,856,900	$2,639,900	$74,780
	Newcastle - Mondell Field	16	$571,800	$1,699,400	$2,271,200	$75,600
	Lusk Municipal Airport	3	$88,200	$319,700	$407,900	$13,820
	Annual Impacts All Assigned Airports	394	$13,814,300	$29,098,700	$42,913,000	$1,540,910
	Annual Impacts from Commercial Airline Functions	*204*	*$6,544,100*	*$12,406,600*	*$18,950,700*	*$786,020*
3	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Annual Impacts All Assigned Airports	1,918	$73,523,500	$160,817,800	$234,341,300	$8,766,250
	Annual Impacts from Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
4	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Guernsey - Camp Guernsey Army Airfield	26	$1,441,900	$2,039,200	$3,481,100	$18,900
	Wheatland - Phifer Airfield	16	$573,600	$2,402,100	$2,975,700	$104,120
	Annual Impacts All Assigned Airports	2,654	$94,466,200	$157,307,400	$251,773,600	$3,912,400
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Torrington Municipal Airport	16	$783,000	$1,856,900	$2,639,900	$74,780
5	Guernsey - Camp Guernsey Army Airfield	26	$1,441,900	$2,039,200	$3,481,100	$18,900
	Annual Impacts All Assigned Airports	2,338	$82,751,700	$128,425,300	$211,177,000	$2,345,000
	Annual Impacts from Commercial Airline Functions	*182*	*$6,259,500*	*$21,282,600*	*$27,542,100*	*$1,073,570*
	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
6	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Annual Impacts All Assigned Airports	1,519	$58,557,600	$127,582,200	$186,139,800	$6,991,070
	Annual Impacts from Commercial Airline Functions	*1,027*	*$34,527,400*	*$70,936,400*	*$105,463,800*	*$4,463,080*
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
7	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
8	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
9	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
10	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Torrington Municipal Airport	16	$783,000	$1,856,900	$2,639,900	$74,780
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,620	$93,267,200	$154,184,200	$247,451,400	$3,852,380
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
11	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
12	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
13	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
14	Douglas - Converse County Airport	20	$717,500	$2,264,600	$2,982,100	$88,330
	Annual Impacts All Assigned Airports	2,612	$92,450,700	$152,866,100	$245,316,800	$3,789,380
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
15	Rawlins Municipal Airport - Harvey Field	22	$1,104,600	$2,014,300	$3,118,900	$98,830
	Annual Impacts All Assigned Airports	642	$23,674,200	$53,574,800	$77,249,000	$2,941,310
	Annual Impacts from Commercial Airline Functions	*378*	*$12,197,200*	*$31,385,000*	*$43,582,200*	*$1,835,070*
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
16	Annual Impacts All Assigned Airports	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Annual Impacts from Commercial Airline Functions	*14,819*	*$667,905,000*	*$588,245,400*	*$1,256,150,400*	*$64,691,570*
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
17	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100	$456,030
	Evanston - Uinta County Airport - Burns Field	30	$943,100	$2,470,400	$3,413,500	$121,880
18	Fort Bridger Airport	5	$152,100	$528,400	$680,500	$17,680
	Kemmerer Municipal Airport	8	$276,900	$715,500	$992,400	$29,120
	Annual Impacts All Assigned Airports	461	$17,670,200	$40,784,700	$58,454,900	$2,017,460
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
19	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Evanston - Uinta County Airport - Burns Field	30	$943,100	$2,470,400	$3,413,500	$121,880

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Fort Bridger Airport	5	$152,100	$528,400	$680,500	$17,680
	Annual Impacts All Assigned Airports	359	$12,458,400	$28,487,000	$40,945,400	$1,532,310
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
20	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Pinedale - Ralph Wenz Field	34	$1,437,600	$3,098,400	$4,536,000	$112,800
	Big Piney - Miley Memorial Field	8	$261,200	$530,200	$791,400	$16,700
	Annual Impacts All Assigned Airports	16,148	$727,611,400	$668,744,900	$1,396,356,300	$70,210,640
	Annual Impacts from Commercial Airline Functions	*15,106*	*$677,833,300*	*$612,584,700*	*$1,290,418,000*	*$65,981,020*
21	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100	$456,030
	Kemmerer Municipal Airport	8	$276,900	$715,500	$992,400	$29,120
	Annual Impacts All Assigned Airports	16,033	$723,684,200	$663,519,000	$1,387,203,200	$69,905,280
	Annual Impacts from Commercial Airline Functions	*15,002*	*$674,012,300*	*$604,459,600*	*$1,278,471,900*	*$65,567,310*
22	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Afton - Lincoln County Municipal Airport	94	$4,934,900	$11,582,200	$16,517,100	$456,030
	Pinedale - Ralph Wenz Field	34	$1,437,600	$3,098,400	$4,536,000	$112,800
	Big Piney - Miley Memorial Field	8	$261,200	$530,200	$791,400	$16,700
	Annual Impacts All Assigned Airports	16,067	$725,106,100	$666,432,100	$1,391,538,200	$70,005,660
	Annual Impacts from Commercial Airline Functions	*15,002*	*$674,012,300*	*$604,459,600*	*$1,278,471,900*	*$65,567,310*
23	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Annual Impacts All Assigned Airports	16,293	$728,977,700	$669,579,200	$1,398,556,900	$70,441,070
	Annual Impacts from Commercial Airline Functions	*15,324*	*$683,223,000*	*$621,089,000*	*$1,304,312,000*	*$66,533,210*
24	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Annual Impacts All Assigned Airports	16,293	$728,977,700	$669,579,200	$1,398,556,900	$70,441,070
	Annual Impacts from Commercial Airline Functions	*15,324*	*$683,223,000*	*$621,089,000*	*$1,304,312,000*	*$66,533,210*
25	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600	$49,520
	Annual Impacts All Assigned Airports	706	$22,678,700	$45,372,500	$68,051,200	$2,463,210
	Annual Impacts from Commercial Airline Functions	*505*	*$15,318,000*	*$32,843,600*	*$48,161,600*	*$1,841,640*
26	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Greybull - South Big Horn County Airport	32	$1,731,300	$2,280,400	$4,011,700	$87,830
	Worland Municipal Airport	46	$2,389,900	$5,821,200	$8,211,100	$241,570
	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600	$49,520
	Cowley - North Big Horn County Airport	6	$192,600	$799,100	$991,700	$26,760
	Annual Impacts All Assigned Airports	1,130	$40,926,700	$88,569,000	$129,495,700	$4,656,960
	Annual Impacts from Commercial Airline Functions	*648*	*$20,918,800*	*$42,833,700*	*$63,752,500*	*$2,422,550*
27	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Greybull - South Big Horn County Airport	32	$1,731,300	$2,280,400	$4,011,700	$87,830
	Worland Municipal Airport	46	$2,389,900	$5,821,200	$8,211,100	$241,570
	Thermopolis - Hot Springs County Airport	18	$726,400	$1,805,300	$2,531,700	$78,950

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Annual Impacts All Assigned Airports	1,297	$48,090,500	$101,943,800	$150,034,300	$5,320,640
	Annual Impacts from Commercial Airline Functions	*752*	*$24,739,800*	*$50,958,800*	*$75,698,600*	*$2,836,260*
28	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Greybull - South Big Horn County Airport	32	$1,731,300	$2,280,400	$4,011,700	$87,830
	Worland Municipal Airport	46	$2,389,900	$5,821,200	$8,211,100	$241,570
	Thermopolis - Hot Springs County Airport	18	$726,400	$1,805,300	$2,531,700	$78,950
	Annual Impacts All Assigned Airports	2,160	$80,790,000	$166,893,300	$247,683,300	$8,936,060
	Annual Impacts from Commercial Airline Functions	*1,441*	*$47,576,500*	*$96,734,300*	*$144,310,800*	*$5,759,100*
29	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Annual Impacts All Assigned Airports	695	$26,172,300	$59,307,900	$85,480,200	$3,224,910
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
30	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Annual Impacts All Assigned Airports	695	$26,172,300	$59,307,900	$85,480,200	$3,224,910
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
31	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
32	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
33	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Lander - Hunt Field	46	$2,785,600	$5,416,300	$8,201,900	$208,710
	Dubois Municipal Airport	8	$283,700	$906,400	$1,190,100	$32,240
	Annual Impacts All Assigned Airports	17,363	$775,615,600	$770,684,300	$1,546,299,900	$75,775,100
	Annual Impacts from Commercial Airline Functions	*15,938*	*$706,270,800*	*$668,350,300*	*$1,374,621,100*	*$69,484,770*
34	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Jackson Hole Airport	15,607	$707,109,200	$625,733,100	$1,332,842,300	$68,027,380
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Lander - Hunt Field	46	$2,785,600	$5,416,300	$8,201,900	$208,710
	Dubois Municipal Airport	8	$283,700	$906,400	$1,190,100	$32,240
	Annual Impacts All Assigned Airports	17,363	$775,615,600	$770,684,300	$1,546,299,900	$75,775,100
	Annual Impacts from Commercial Airline Functions	*15,938*	*$706,270,800*	*$668,350,300*	*$1,374,621,100*	*$69,484,770*
35	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
36	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
37	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
38	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	1,718	$68,008,100	$147,436,100	$215,444,200	$7,951,610
	Annual Impacts from Commercial Airline Functions	*1,079*	*$37,859,300*	*$73,880,800*	*$111,740,100*	*$4,498,370*
39	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
40	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Annual Impacts All Assigned Airports	1,898	$72,806,000	$158,553,200	$231,359,200	$8,677,920
	Annual Impacts from Commercial Airline Functions	*1,179*	*$40,582,400*	*$78,162,300*	*$118,744,700*	*$4,870,680*
41	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
42	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
43	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
44	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Pine Bluffs Municipal Airport	12	$751,000	$1,725,800	$2,476,800	$76,550
	Annual Impacts All Assigned Airports	2,604	$92,484,200	$152,327,300	$244,811,500	$3,777,600
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
45	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	377	$12,349,400	$36,453,400	$48,802,800	$2,032,900
	Laramie Regional Airport	*296*	*$11,206,400*	*$26,072,300*	*$37,278,700*	*$1,449,730*
46	Cheyenne Regional Airport - Jerry Olsen Field	2,296	$80,526,800	$124,529,200	$205,056,000	$2,251,320
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Annual Impacts All Assigned Airports	2,592	$91,733,200	$150,601,500	$242,334,700	$3,701,050
	Annual Impacts from Commercial Airline Functions	*377*	*$12,349,400*	*$36,453,400*	*$48,802,800*	*$2,032,900*
47	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Laramie Regional Airport	296	$11,206,400	$26,072,300	$37,278,700	$1,449,730
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Rawlins Municipal Airport - Harvey Field	22	$1,104,600	$2,014,300	$3,118,900	$98,830
	Saratoga - Shively Field	193	$5,868,100	$10,451,800	$16,319,900	$765,470
	Dixon Airport	10	$537,300	$1,441,000	$1,978,300	$64,730
	Annual Impacts All Assigned Airports	2,223	$84,153,500	$178,607,900	$262,761,400	$9,885,530
	Annual Impacts from Commercial Airline Functions	*1,314*	*$44,455,700*	*$95,275,700*	*$139,731,400*	*$5,752,530*
48	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
49	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Evanston - Uinta County Airport - Burns Field	30	$943,100	$2,470,400	$3,413,500	$121,880
	Annual Impacts All Assigned Airports	354	$12,306,300	$27,958,600	$40,264,900	$1,514,630
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*
50	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Powell Municipal Airport	20	$810,200	$1,526,400	$2,336,600	$49,520
	Annual Impacts All Assigned Airports	706	$22,678,700	$45,372,500	$68,051,200	$2,463,210
	Annual Impacts from Commercial Airline Functions	*505*	*$15,318,000*	*$32,843,600*	*$48,161,600*	*$1,841,640*
51	Cody - Yellowstone Regional Airport	686	$21,868,500	$43,846,100	$65,714,600	$2,413,690
	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Buffalo - Johnson County Airport	16	$584,300	$2,054,000	$2,638,300	$98,940
	Annual Impacts All Assigned Airports	1,381	$48,040,800	$103,154,000	$151,194,800	$5,638,600
	Annual Impacts from Commercial Airline Functions	*852*	*$27,462,900*	*$55,240,300*	*$82,703,200*	*$3,208,570*
52	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
53	Gillette - Northeast Wyoming Regional Airport	339	$11,653,800	$22,958,100	$34,611,900	$1,288,380
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	679	$25,588,000	$57,253,900	$82,841,900	$3,125,970
	Annual Impacts from Commercial Airline Functions	*347*	*$12,144,900*	*$22,396,700*	*$34,541,600*	*$1,366,930*
54	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Lander - Hunt Field	46	$2,785,600	$5,416,300	$8,201,900	$208,710
	Annual Impacts All Assigned Airports	1,424	$56,859,500	$118,556,600	$175,416,100	$6,322,730
	Annual Impacts from Commercial Airline Functions	*936*	*$32,258,500*	*$63,890,700*	*$96,149,200*	*$3,917,460*
55	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Riverton - Central Wyoming Regional Airport	175	$7,440,200	$13,895,000	$21,335,200	$661,010
	Annual Impacts All Assigned Airports	1,378	$54,073,900	$113,140,300	$167,214,200	$6,114,020
	Annual Impacts from Commercial Airline Functions	*936*	*$32,258,500*	*$63,890,700*	*$96,149,200*	*$3,917,460*
56	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
57	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	*832*	*$28,437,500*	*$55,765,600*	*$84,203,100*	*$3,503,750*
58	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Sheridan County Airport	340	$13,934,200	$34,295,800	$48,230,000	$1,837,590
	Annual Impacts All Assigned Airports	1,543	$60,567,900	$133,541,100	$194,109,000	$7,290,600

2020 House District	Airport Name	Total Employment	Annual Payroll	Annual Spending	Annual Economic Activity	State & Local Taxes
	Annual Impacts from Commercial Airline Functions	975	$34,038,300	$65,755,700	$99,794,000	$4,084,660
	Casper - Natrona County International Airport	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
59	Annual Impacts All Assigned Airports	1,203	$46,633,700	$99,245,300	$145,879,000	$5,453,010
	Annual Impacts from Commercial Airline Functions	832	$28,437,500	$55,765,600	$84,203,100	$3,503,750
	Rock Springs - Southwest Wyoming Regional Airport	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
60	Annual Impacts All Assigned Airports	324	$11,363,200	$25,488,200	$36,851,400	$1,392,750
	Annual Impacts from Commercial Airline Functions	*183*	*$6,107,300*	*$16,214,200*	*$22,321,500*	*$875,740*