



WEST VIRGINIA  
**AZIS** AVIATION  
ECONOMIC  
IMPACT STUDY

2020

# Technical Report



# 2020 West Virginia Aviation Economic Impact Study

*Prepared for*



**West Virginia Aeronautics Commission**

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Building 5  
Charleston, WV 25305

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# CHAPTER 1. INTRODUCTION AND METHODOLOGY

## 1.1 Introduction

The West Virginia Aeronautics Commission (WVAC) initiated the 2020 West Virginia Aviation Economic Impact Study (WV AEIS) to quantify the contributions of West Virginia's airport system to the Mountain State's economy. The results of the WV AEIS showcase the tremendous impact aviation has on each airport's regional economy, along with the system's combined impacts at the state level.

The primary function of West Virginia's public-use airports is to support the safe transport of people and goods into and out of the state. System airports provide commercial airline and general aviation (GA) service connecting residents to thousands of destinations domestically and internationally and allowing out-of-state visitors access to the "Almost Heaven" offerings found across West Virginia. Airports are important economic anchors serving as job centers and support a wide range of industries in the state including aerospace, tourism, mining, agriculture, manufacturing, health, and more. Collectively, the operation of airports and spending by visitors arriving to West Virginia via these airports generate significant economic activity.

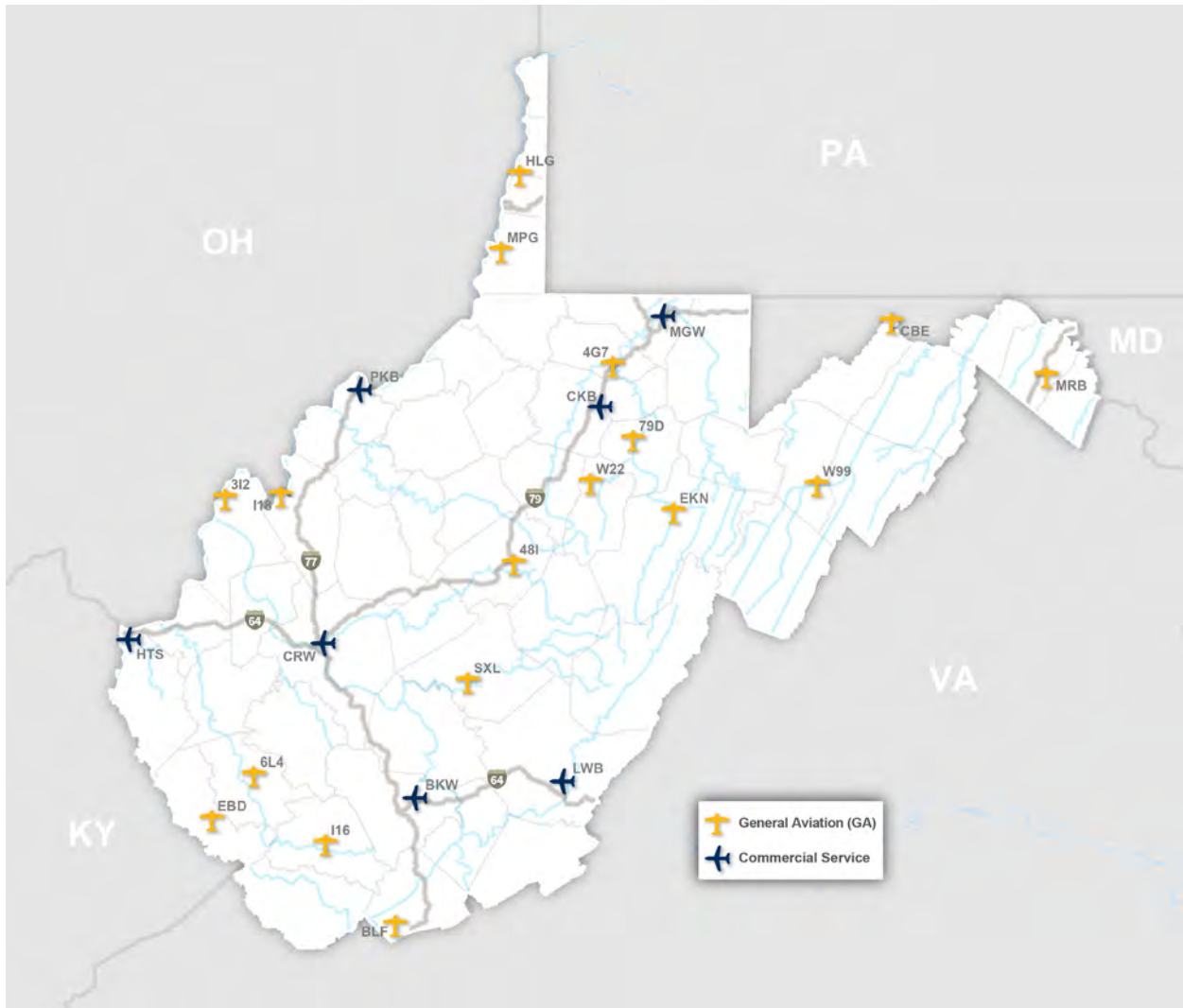
It is important to recognize that the value of West Virginia's airports extends far beyond their monetary impact, as they support an enhanced quality of life for residents and visitors alike. The WV AEIS highlights some of the critical qualitative operations airports support, such as emergency medical evacuation, package delivery, law enforcement, aerial firefighting, and much more.

## 1.2 Study Airports

West Virginia's airport system comprises 24 publicly owned, public-use airports that serve numerous communities throughout West Virginia and in bordering states. All 24 airports are included in the Federal Aviation Administration's (FAA's) National Plan of Integrated Airport Systems (NPIAS), signaling their importance to the national aviation network. **Figure 1** illustrates the location of system airports and identifies them as either Commercial Service airports (providing airline service) or GA airports (serving all other operations except airline service).

**Table 1** presents all 24 airports included in the WV AEIS, alphabetically by associated city, separating those offering commercial service.

**Figure 1: West Virginia System Airports**



Source: Kimley-Horn, 2020

**Table 1: West Virginia System Airports**

Associated City	Airport Name	FAA ID	NPIAS Inclusion	Ownership	Use
<b>Commercial Service</b>					
<b>Beckley</b>	Raleigh County Memorial	BKW	✓	Public	Public
<b>Charleston</b>	Yeager	CRW	✓	Public	Public
<b>Clarksburg</b>	North Central West Virginia	CKB	✓	Public	Public
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	✓	Public	Public
<b>Lewisburg</b>	Greenbrier Valley	LWB	✓	Public	Public
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	✓	Public	Public

Associated City	Airport Name	FAA ID	NPIAS Inclusion	Ownership	Use
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	✓	Public	Public
<b>General Aviation</b>					
<b>Bluefield</b>	Mercer County	BLF	✓	Public	Public
<b>Buckhannon</b>	Upshur County Regional	W22	✓	Public	Public
<b>Cumberland</b>	Greater Cumberland Regional	CBE	✓	Public	Public
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN	✓	Public	Public
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7	✓	Public	Public
<b>Logan</b>	Logan County	6L4	✓	Public	Public
<b>Martinsburg</b>	Eastern West Virginia Regional/ Shepherd Field	MRB	✓	Public	Public
<b>Moundsville</b>	Marshall County	MPG	✓	Public	Public
<b>Petersburg</b>	Grant County	W99	✓	Public	Public
<b>Philippi</b>	Philippi/Barbour County Regional	79D	✓	Public	Public
<b>Pineville</b>	Kee Field	I16	✓	Public	Public
<b>Point Pleasant</b>	Mason County	3I2	✓	Public	Public
<b>Ravenswood</b>	Jackson County	I18	✓	Public	Public
<b>Summersville</b>	Summersville	SXL	✓	Public	Public
<b>Sutton</b>	Braxton County	48I	✓	Public	Public
<b>Wheeling</b>	Wheeling Ohio County	HLG	✓	Public	Public
<b>Williamson</b>	Appalachian Regional	EBD	✓	Public	Public

Sources: Airport Master Record 5010-1 Form, 2020; FAA's NPIAS 2021-2025, 2020

## 1.3 Methodology

The WV AEIS utilized an industry-accepted methodology for measuring and documenting the economic impact of aviation in the state. The study relied on collecting information about airport administration, airport tenants, airport construction, and out-of-state visitor spending from commercial service and GA visitors to quantify the economic contribution of West Virginia's airports. The following sections outline the terminology, geographies, data calculation, and economic modeling approaches used in the study.

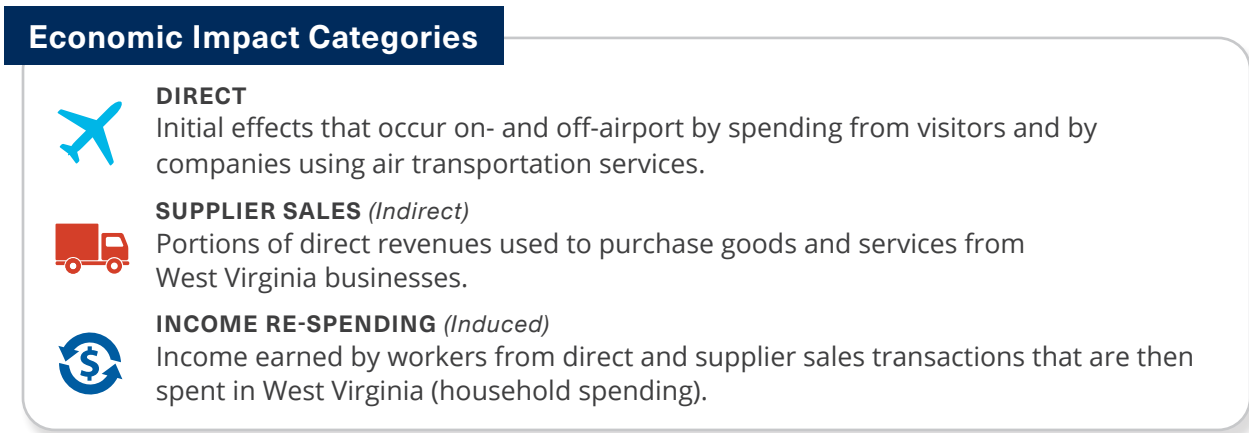
### 1.3.1 Terminology

Before the methodology can be presented, an understanding of the terminology and concepts used is required. The following three sections define the terms used in the WV AEIS and their relationship to one another in the calculation of the economic impact of West Virginia's 24 study airports.

### 1.3.1.1 Economic Impact Categories

Three terms are used in the WV AEIS to describe the scope of economic impacts and calculate the total impacts for each study airport and the state as a whole. **Figure 2** provides a definition of each term, along with its associated economic term. Economic terms such as “indirect” and “induced” are commonly used in economic analyses, but it can be difficult to discern what those terms mean. To minimize confusion, the WV AEIS utilizes straightforward terminology that better describes what is represented by each category.

**Figure 2: Economic Impact Categories**



Sources: EBP US, 2020; Kimley-Horn, 2020

### 1.3.1.2 Economic Impact Indicators

Indicators are used to convey direct impacts, along with multiplier impacts (supplier sales and income re-spending). **Figure 3** defines each economic impact indicator. Measurements of these impact indicators in dollars, specifically business revenues, value added, and payroll, cannot be added together. This is due to value added comprising a component of business revenues and payroll comprising a component of value added (see **Figure 4**). Throughout the WV AEIS, dollar values are reported in 2019 dollars and rounded to the nearest thousand.

**Figure 3: Economic Impact Indicators**

**Economic Impact Indicators**



**JOBS**

Jobs are the total number of persons employed that are associated with business revenues and payroll, regardless of whether they are full-time or part-time.



**PAYROLL**

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



**VALUE ADDED**

Value added measures the economic productivity of each aviation-related business in West Virginia calculated as business revenues earned minus the costs of purchasing goods and services from other businesses. Value added is a company or industry contribution to Gross State Product (GSP), which is a local concept synonymous with Gross Domestic Product (GDP). It includes all labor compensation, profits, and business taxes paid.

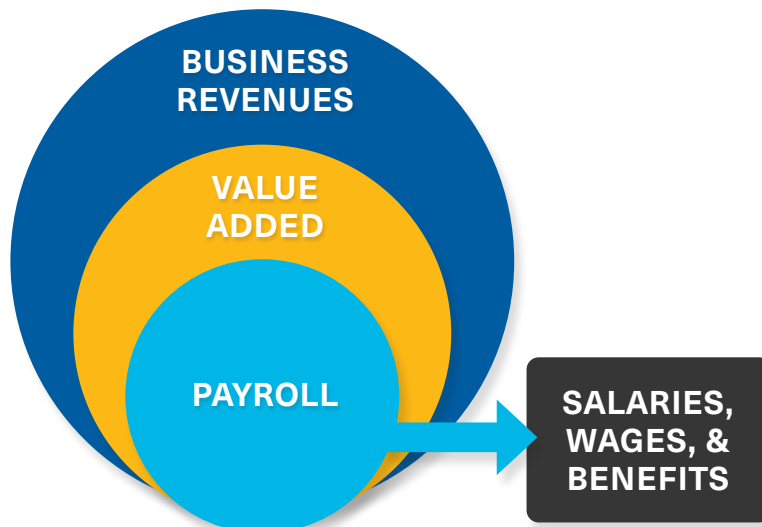


**BUSINESS REVENUES**

Business revenues incorporate expenditures needed to administer airports, sales of goods and services by airport tenants, budget expenditures by public sector agencies located on airports, cost of capital expenditures, visitor spending in West Virginia’s hospitality-related sectors, and sales enabled by air cargo services. This is commonly referred to as business “output” or sales.

Sources: EBP US, 2020; Kimley-Horn, 2020

**Figure 4: Relationship of Value Added**

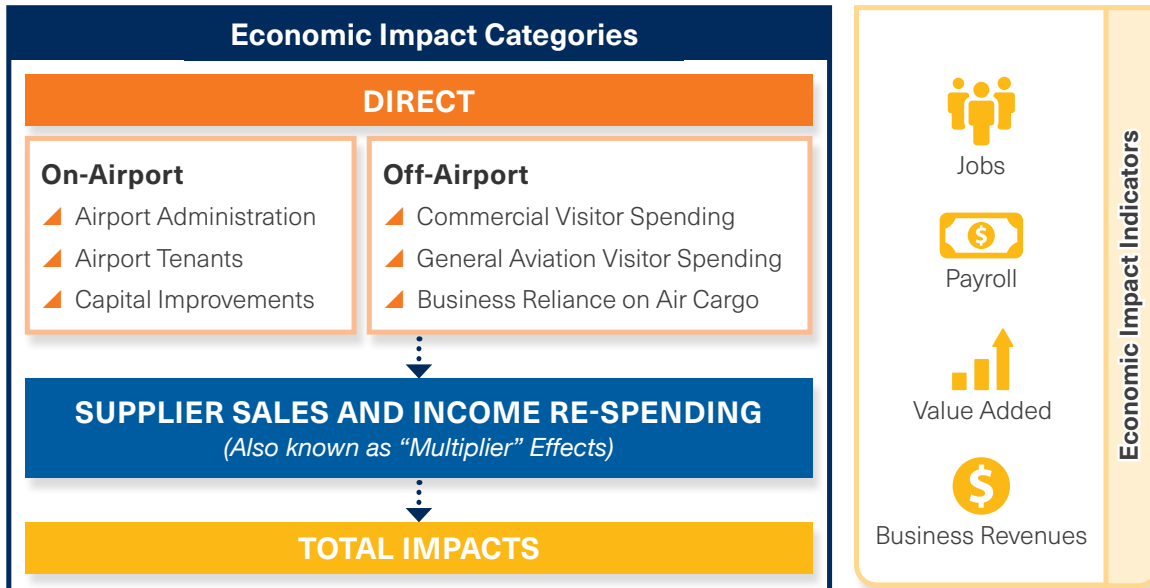


Sources: EBP US, 2020; Kimley-Horn, 2020

### 1.3.1.3 Calculation of Total Economic Impacts

**Figure 5** illustrates the relationship of the economic impact categories (direct, multiplier [supplier sales and income re-spending], and total) to the economic impact indicators (jobs, payroll, value added, and business revenues). The WV AEIS presents findings at all levels, meaning results are separated between direct impacts, impacts from supplier sales and income re-spending, and total impacts. These impacts are reported as jobs, payroll, value added, and business revenues.

**Figure 5: Calculation of Total Economic Impacts**



Sources: EBP US, 2020; Kimley-Horn, 2020

To further explain the relationship of economic categories and economic indicators, consider this hypothetical scenario: an airport generates revenue (business revenues) from users paying rent for an aircraft hangar, buying fuel, or for other services the airport provides. The airport uses that revenue to operate the airport, pay taxes, and provide wages and benefits (payroll) to their employees (jobs). The direct economic impact of the airport includes the number of on-airport employees, their total payroll, and airport revenues. As a result of these revenues, the airport can also purchase goods and services from West Virginia businesses (supplier sales) for groundskeeping, information technology (IT) management, security, etc. Those employed by the airport, either directly through payroll or through purchased services, will spend their wages in the community (income re-spending).

## 1.4 Geographies for Economic Modeling

The WV AEIS study was conducted at regional and statewide levels to recognize the unique composition of economies found across West Virginia. Factors such as cost of living, salaries, productivity, and industries differ between urban, rural, and recreational areas of the state from the western part of the state to the eastern panhandle, and southern parts of West Virginia to the northern panhandle. The use of regional multipliers presents a more accurate profile of economic factors that are indicative of the regional economy such as mix of industries, wage rates, business revenues, and sales per employee. These regional multipliers are used to estimate the supplier

sales and income re-spending associated with each airport. Regional economic data were also used to calculate the relationship between economic indicators.

Direct impact data were obtained from surveys distributed to airport managers and on-airport tenants (see **Chapter 2. The Data Collection Process** for details on the data collection effort). Surveys asked for information on three measures: jobs, payroll, and business revenues. It should be noted that value added is always calculated. A majority of respondents provided one measure, whereas some respondents provided two, and very few provided all three. In cases where data were not provided for all three measures, regional economic data were used to “fill-in” these missing values.

Information on visitor spending was collected from surveys of travelers and from studies commissioned by the West Virginia Tourism Office. Spending by visitors from outside the state represents business revenue for tourism businesses in the state, which is then translated into other economic indicators (jobs, payroll, value added) using regional economic data.

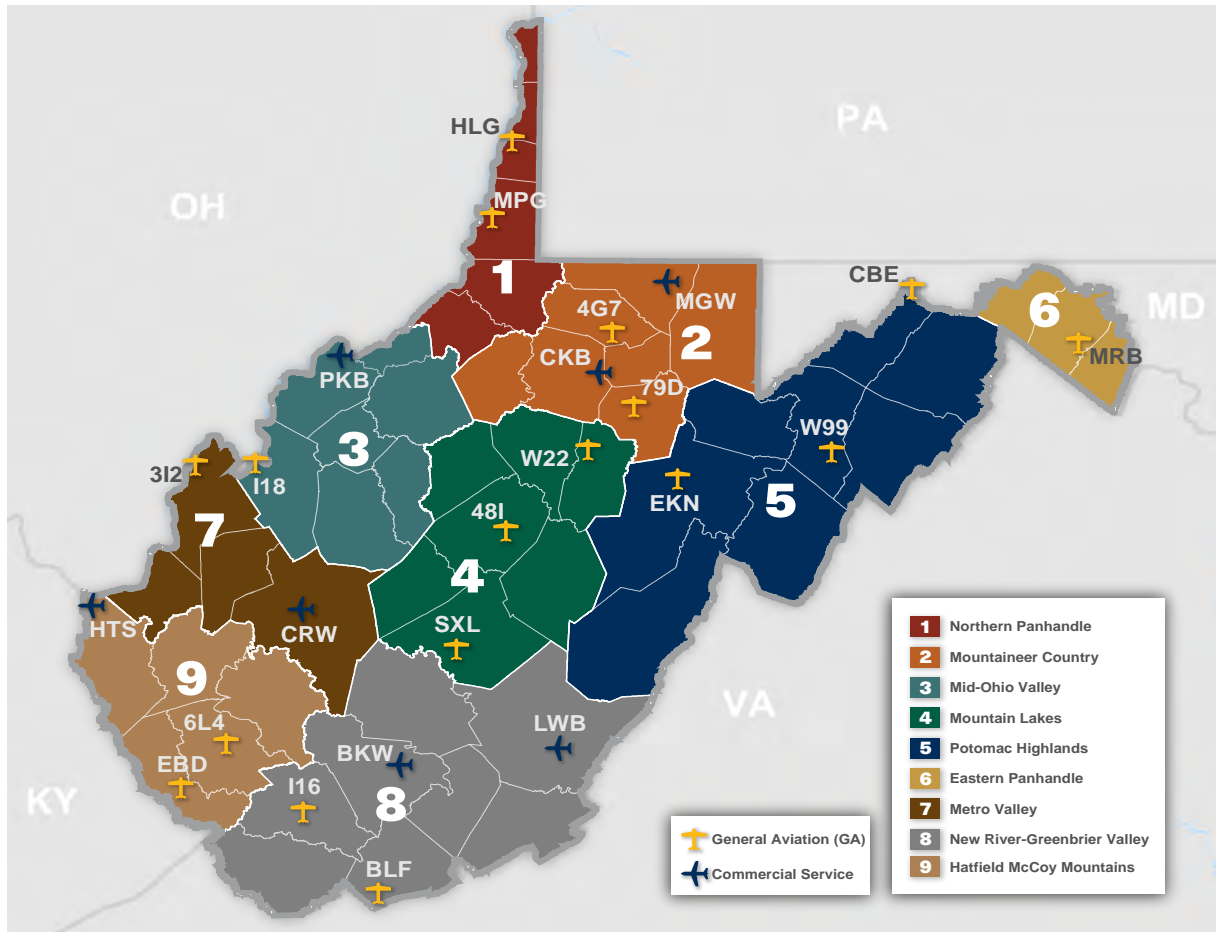
Additionally, information on reliance of off-airport industries in West Virginia on cargo that is transported through West Virginia airports was generated using a combination of air cargo data sources and economic data to relate the movement of goods by air to its role in the West Virginia economy.

Multiplier effects (supplier purchases and income re-spending) are modeled at both regional and statewide scales to offer a more accurate representation of regional and statewide impacts for each airport and then collectively for West Virginia as a whole. An airport’s regional impacts are calculated using a summation of direct regional impacts plus regional multiplier effects. Statewide impacts utilize the same regional direct impacts but use statewide multiplier effects. A more robust explanation of the differences between regional and statewide impacts is presented in a subsequent section of this chapter.

For the purposes of the WV AEIS, the state was organized into nine regions based upon the West Virginia Tourism Office’s tourism regions as shown in **Figure 6**. The counties located within each region are listed in **Table 2**.



**Figure 6: Tourism Regions in West Virginia**



Sources: West Virginia Tourism Office, 2020; Kimley-Horn, 2020

**Table 2: Counties within each Tourism Region**

Region	Name	Counties
1	Northern Panhandle	Brooke, Hancock, Marshall, Ohio, Tyler, Wetzel
2	Mountaineer Country	Barbour, Doddridge, Harrison, Marion, Monongalia, Preston, Taylor
3	Mid-Ohio Valley	Calhoun, Jackson, Pleasants, Ritchie, Roane, Wirt, Wood
4	Mountain Lakes	Braxton, Clay, Gilmer, Lewis, Nicholas, Upshur, Webster
5	Potomac Highlands	Grant, Hampshire, Hardy, Mineral, Pendleton, Pocahontas, Randolph, Tucker
6	Eastern Panhandle	Berkeley, Jefferson, Morgan
7	Metro Valley	Cabell, Kanawha, Mason, Putnam
8	New River-Greenbrier Valley	Fayette, Greenbrier, McDowell, Mercer, Monroe, Raleigh, Summers, Wyoming
9	Hatfield McCoy Mountains	Boone, Lincoln, Logan, Mingo, Wayne

Source: West Virginia Tourism Office, 2020

## 1.5 Data Calculation Approach

Primary and secondary sources of data were used to calculate the economic impact of aviation in West Virginia. Five different surveys were distributed to different groups to collect key information related to economic activities occurring on- and off-airports. **Chapter 2. The Data Collection Process** documents the data collection methods used for the WV AEIS as well as the surveys used to collect primary data from the following groups:

- Airport managers
- On-airport tenants
- Businesses that rely on airports included in the WV AEIS
- Out-of-state visitors who used commercial service
- Out-of-state visitors who used GA

The WV AEIS relied on secondary sources to fill in any gaps in information pertaining to on- and off-airport business activity and visitor spending gathered from data collection efforts.

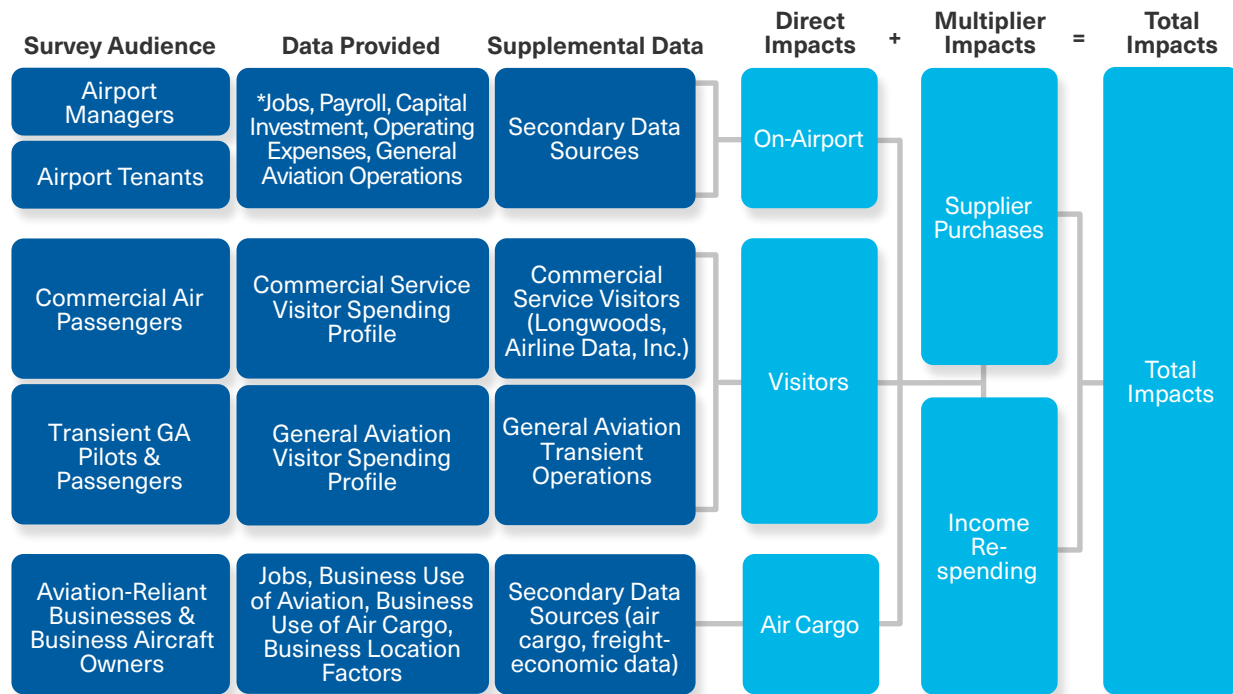
Secondary sources included:

- Data Axle Reference Solutions (formerly ReferenceUSA)
- Environmental Systems Research Institute (ESRI) Community Analyst
- Longwoods International (provided by the West Virginia Tourism Office)
- IMPLAN, LLC (using data from the Bureau of Economic Analysis [BEA], Bureau of the Census, and other federal agencies)
- FAA
- WISERTrade (using data from the United States [U.S.] Foreign Trade Division)
- The Freight Analysis Framework (FAF)
- The Air Carrier Statistics Database, also known as T-100

Through these efforts, primary and secondary data sources created the foundation needed to quantify the direct on-airport and off-airport visitor spending impacts of each airport. These data were then input into IMPLAN, an industry-accepted economic model to calculate the influence of multiplier effects from supplier purchases and income re-spending. Additional information about the IMPLAN modeling process is described in **Section 1.6 Economic Modeling Process**.

An overview of data collection and how it relates to the economic modeling process used in the WV AEIS is shown in **Figure 7**.

**Figure 7: Overview of Data Collection and Economic Modeling Process**



\*Revenue generation information collected but not utilized in the economic modeling process

Sources: EBP US, 2020; Kimley-Horn, 2020

### 1.5.1 On-Airport Data

On-airport economic activity is captured in three categories: 1) airport administration, 2) capital improvement expenditures, and 3) airport tenants. These data sources are described below:

#### Airport Administration

Airport administration includes airport managers and staff necessary to an airport's operation including business operations, grounds/building maintenance, contracted individuals or firms, and other employees. Data received related to airport administration included employment, payroll, and annual airport budgets. In cases where airport administration provided only employment information, county-level data derived primarily from BEA and modeled in IMPLAN were used to estimate payroll and business revenues.

#### Capital Improvements

Capital improvement expenditures were reported by airport managers for the past four years (2016-2019) to calculate an average annual expenditure. Obtaining an average for capital improvements accounts for years in which expenditures are very high at an airport and very low during other years. This allows for any anomalies due to available funding, weather, project schedules, etc. to be removed. Common capital expenditures include pavement maintenance, lighting, fencing, and terminal and hangar construction among many others. Airport tenants also provided information about any capital improvement expenditures they paid for such as hangar construction, building out office space, etc. Capital improvement expenditures were treated as direct business revenues as these would equate to revenues received by the companies that perform the construction work. To develop a complete profile of direct impacts, economic data in

IMPLAN were used to link the construction revenues to associated jobs, payroll, and value added, based on regional average relationships.

### **Airport Tenants**

As a component of the Airport Manager Survey distributed to all 24 West Virginia system airports (see **Chapter 2. Data Collection Process**), managers were asked to provide information about their tenants, including the business/organization name, main product or service provided, contact information, and estimates of employment, if known. These lists were compiled into a tenant tracking database used to lead the Airport Tenant Survey distribution and outreach. The surveys requested information on employment, business type, and expenditures (including payroll and capital improvement expenditures).

Nearly 150 on-airport tenants were identified across all 24 system airports in West Virginia. Numerous rounds of outreach were conducted in an effort to capture data from each airport tenant. Data were collected from 142 of the of the 148 tenants surveyed. Of the 142 respondents, 135 reported at least one job.

Through the combination of primary and secondary tenant data, each tenant was assigned an industry classification based upon its business type. Classifying each tenant by industry established an accurate representation of direct economic impacts (jobs, payroll, value added, and business revenues) and estimate of multiplier effects (supplier sales and income re-spending) associated with each business.

Two levels of information were obtained from each tenant:

- Employment (number of full-time and/or part-time employees) only; or
- Employment and payroll

Data from IMPLAN were utilized to calculate missing information about tenants' payroll and business revenues if these were not reported on a survey. For tenants that did provide both employment and payroll information, IMPLAN modeling was adjusted to maintain the same business revenue to payroll ratios as shown by default regional values in IMPLAN per region and industry.

### **1.5.2 Off-Airport Visitor Spending**

One of the most commonly known functions of airports is the facilitation of passenger travel. Out-of-state visitors utilizing scheduled commercial airline service and GA aircraft generate important economic contributions to the state and regional economies. Out-of-state visitors traveling to West Virginia bring new money into the state's economy. Visitor spending supports jobs and payroll primarily in hospitality-related industries including lodging, restaurants, retail, entertainment, and local transportation services.

The analysis of GA visitor spending data were limited to transient (out-of-state) activity which makes up a small percentage of overall GA operations at airports in the state. Similarly, the analysis of commercial visitor spending was limited to only those out-of-state visitors with final destinations in West Virginia. The assessment of visitor spending impacts did not include local passenger activity or passengers that used a West Virginia airport to connect to final destinations outside of the state.

### 1.5.2.1 *Commercial Visitors*

The primary source of commercial visitor spending data for 2019 was Longwoods International, an industry-accepted database which collects tourism spending data for each state. These data was provided by the West Virginia Tourism Office. Calendar year 2018 was the latest year of available data from the Tourism Office at the time of this study. Data from 2015-2018 were adjusted to 2019 dollars for this study and averaged across the four-year period.

In addition to this source, a Commercial Air Passenger Survey was deployed at participating airports on airport Wi-Fi access pages and airport websites. Visitors traveling through Yeager Airport (CRW), Tri-State/Milton J. Ferguson Field (HTS), and Morgantown Municipal - Walter L. Bill Hart Field (MGW) airports between July 2020 and November 2020 were invited to complete the online survey documenting their length of stay and expenditures made in West Virginia.

Through survey efforts at these three commercial service airports, valid visitor spending data were collected from over 449 visitors who arrived in West Virginia from out of state at CRW and 10 visitors who arrived at MGW.

Limited responses were gathered from HTS as the airport lost some commercial airline service at the time visitor surveys were conducted due to reductions in airline service prompted by reduced passenger travel resulting from COVID-19. Most of the responses from MGW were from local residents flying out of the airport, not out-of-state visitors inbound.

A combination of spending information from Longwoods International and valid passenger surveys at CRW were used to develop spending profiles for visitors arriving to each of the state's commercial service airports. Visitors at CRW reported an average spending of \$386 per visitor per trip. The Longwoods International data reported an average spending of \$240 per visitor per trip by West Virginia visitors arriving by air (after adjusting to 2019 dollars). Information about variation in strength of each commercial airports' regional economy on a per capita basis was used to estimate individual airport visitor spending levels from the Longwoods International data. From there, the estimated Longwoods International visitor spending level for CRW was compared to the actual observed visitor spending level at CRW from the survey, and an adjustment factor was calculated as the ratio between the survey level and Longwoods level. This adjustment factor was then applied to all other airport-specific estimated visitor spending values derived from Longwoods International. In addition, visitor spending levels for Greenbrier Valley Airport (LWB) were further adjusted based on input from WVAC to be in better alignment with the levels expected for the region's specialized tourist economy.

The number of out-of-state visitors to West Virginia was obtained by a third-party source, Airline Data, Inc. **Table 3** presents the visitor spending profiles of travelers arriving to West Virginia via the state's commercial service airports.

**Table 3: Commercial Service Visitors and Spending Per Visitor Per Trip**

Associated City	Airport Name	FAA ID	2019 Visitors	Spending per Visitor per Trip
Beckley	Raleigh County Memorial	BKW	4,287	\$210
Charleston	Yeager	CRW	87,543	\$386
Clarksburg	North Central West Virginia	CKB	10,942	\$401
Huntington	Tri-State/Milton J. Ferguson Field	HTS	32,134	\$156
Lewisburg	Greenbrier Valley	LWB	5,916	\$430
Morgantown	Morgantown Municipal - Walter L. Bill Hart Field	MGW	3,730	\$400
Parkersburg	Mid-Ohio Valley Regional	PKB	2,541	\$298

Sources: WV AEIS Commercial Air Passenger Survey, 2020; Airline Data, Inc., 2020; Longwoods International, 2015-2018; EBP US, 2020

### 1.5.2.2 GA Visitors

Similar to commercial visitors, GA visitors from outside West Virginia generate new economic activity in the state and regional economy of their destination. To determine the number of true visitors arriving to the state using GA, a multi-step process is used:

1. This process begins by determining the total number of GA operations that took place in West Virginia in 2019. The number of GA operations was first gathered from official sources, including each airport's FAA Airport Master Record Form 5010, and were validated by airport managers on the Airport Manager Survey. In 2019, a total of 241,000 GA operations were conducted in the state.
2. The second step includes dividing the number of operations by two. Since an aircraft operation is defined as a takeoff or a landing, this figure is divided by two to isolate the number of outbound aircraft operations only.
3. Operations considered to be "local" were removed from the total number of operations, leaving what is referred to as "itinerant" operations only. The FAA defines itinerant operations as any aircraft arriving or departing from outside the airport area. However, under this definition, this number includes locally-based aircraft that leave the airport area and return back which are not visitors. In 2019, West Virginia's airports supported 122,000 itinerant operations which comprised almost 51 percent of all GA operations in the state.
4. To parse out true out-of-state visitors from itinerant operations, airport managers were asked to provide the percentage of itinerant operations that were transient (out-of-state) for their airport. Based on manager responses, an estimated 73,000 transient operations took place in West Virginia in 2019, making up 60 percent of total itinerant GA operations in the state.
5. Finally, airport managers were asked to provide the average number of passengers per operation (including the pilot). This varied by airport as some airports support operations by larger aircraft with more passengers than other airports, and each airport experiences a different passenger mix. Generally, responses ranged from two to five passengers per transient operation. From these data, it was estimated that almost 130,000 out-of-state visitors arrived in West Virginia using GA in 2019.

To determine the impacts of GA visitor spending, the final step requires identifying how much the average visitor is spending on their trip to West Virginia. To do this, GA visitor spending data were gathered through responses to a Transient GA Pilot & Passenger Survey (see **Chapter 2. The Data Collection Process**) between July 2020 and November 2020. Similar to the Commercial Air Passenger Survey, the Transient GA Pilot & Passenger Survey targeted only visitors arriving to West Virginia from out of state. Ninety-one surveys were submitted by 12 study airports, representing 279 GA visitors. One hundred and fifty-three of those visitors traveled through LWB, while the remainder were spread across West Virginia's other GA airports. Given the large number of valid observations at LWB, the visitor spending value of \$645 per visitor per trip was used directly for this airport. Note that visitor spending associated with LWB is significantly higher due to travelers visiting The Greenbrier, a luxury resort attracting visitors year round. For the other GA airports, a baseline visitor spending level was calculated first from the survey. This was then adjusted up or down to generate airport-specific estimates based on the relative strength of the economy of the county in which airport is located. Finally, these values were further adjusted by WVAC based on local knowledge of the nature of likely travel to each airport, including the likelihood of an overnight stay. **Table 4** presents the average visitor spending profiles of travelers arriving to West Virginia via GA at all system airports summarized by NPIAS classification.

**Table 4: GA Visitors and Average Spending Per Visitor Per Trip by Airport NPIAS Classification**

Airport NPIAS Classification	2019 GA Visitors	Average Spending per Visitor Per Trip
Commercial Service	28,166	\$394
GA-Regional	67,797	\$101
GA-Local	19,680	\$83
GA-Basic	10,561	\$55
GA-Unclassified	3,615	\$49

*Notes: Although the main type of operation at commercial service airports are those by commercial air carriers, commercial service airports also support GA operations. LWB is not reflected in this table. Sources: WV AEIS Transient GA Pilot & Passenger Survey, 2020, with adjustments based on local knowledge; EBP US, 2020*

### 1.5.3 Off-Airport Aviation Business Reliance Data

Beyond the economic contributions in West Virginia of airport operations, both airside and landside, and of airport-enabled visitor spending, West Virginia airports play an additional economic role in supporting business operations. Analysis of such reliance was divided into two categories: 1) general reliance captured in responses to the Aviation-Reliant Business & Business Aircraft Owner Survey, and 2) a separate air cargo economic impact analysis. A summary of the methodology used to determine the economic reliance of West Virginia businesses on aviation is provided in the following sections and the complete findings can be found in **Appendix C. Economic Reliance of West Virginia Businesses on Aviation.**

#### 1.5.3.1 Aviation-Reliant Business & Business Aircraft Owner Survey

A total of 33 businesses that use West Virginia airports in some way responded to the survey. Businesses were invited to provide a variety of information including their industry, number of employees, and both quantitative and qualitative data on how they rely on both commercial service and GA service to support business operations. Findings from this survey were

summarized to illustrate the various ways in which West Virginia businesses rely on West Virginia airports. These descriptive findings do not constitute a direct impact, but rather represent a profile of survey respondents that is indicative of the diverse ways in which West Virginia businesses rely on aviation.

### 1.5.3.2 *Air Cargo Economic Impacts*

The air cargo economic impact analysis assessed the reliance of off-airport industries in West Virginia on cargo that is transported through West Virginia airports and calculated the economic contributions of this air cargo to off-airport businesses. The air cargo analysis relied on three air cargo data sources to conduct the analysis of off-airport air cargo economic impacts:

- **WISERTrade** reports weights and values of each commodity shipped to or from international destinations that are collected by the U.S. Foreign Trade Division of the U.S. Census Bureau.
- The **FAF**, produced by the Bureau of Transportation Statistics and the Federal Highway Administration (FHWA), integrates data from a variety of sources to create a comprehensive picture of cargo movement between U.S. geographic zones, including major metropolitan areas and the remaining non-metropolitan areas of each state.
- The **Air Carrier Statistics Database, also known as T-100** refers to domestic and international airline market and segment data. These data include reports from certificated U.S. air carriers on monthly air carrier traffic information using Form T-100. These data can be used to determine the total volume of cargo handled at specific airports.

In addition to the above outlined air cargo data sources, the air cargo economic impact analysis also relied on economic data to relate the movement of goods to its role in the West Virginia economy. County-level economic business revenue data by industry sectors were assembled by IMPLAN from federal sources, primarily the BEA. Data assembled by IMPLAN provided detail on the commodities used in the production of goods for each industry by county. These data also allowed for the estimation of commodities produced by West Virginia industries and sold out of state. Freight data and economic impact models were linked to identify the portion of industry activity that is reliant on air cargo by overlaying commodity flows, economic geography, and industries' production processes, which provided an assessment of how air cargo affects the state economy outside of airports.

## 1.6 Economic Modeling Process

Once direct impacts were defined using the data described above, the IMPLAN model was used to calculate multiplier impacts including supplier purchases and income re-spending. To do so, a multi-regional input-output model was calibrated to the West Virginia economy and each of its nine regions. Direct impacts are allocated to regions based on the associated airport's location. They are also assigned to specific industry sectors in IMPLAN to correctly capture the nature of the economic activity. This allows for tracing of supplier effects based on specific profiles of industries in the West Virginia economy. Following estimation of multiplier impacts, these were added to direct impacts to summarize the total economic impact of West Virginia airports—by region, and statewide. The following sections discuss the sectoring used in the economic modeling process.



### 1.6.1 Industry Sectoring

Of the 544 industry and profile sectors available in IMPLAN, 29 sectors were used to capture the wide range of industries present on West Virginia's airports, as shown in **Table 5**. Five aggregate sectors were used to define visitor spending characteristics in the WV AEIS, as shown in **Table 6**.

#### 1.6.1.1 On-Airport Activity

**Table 5** lists all sectors included in the assessment of on-airport impacts. In some instances, responses to the Airport Manager Survey and Airport Tenant Survey were too generalized in terms of associated industry or product. In these cases, employment was assigned to an aggregated industry (e.g. aerospace, retail, entertainment, etc.). Aggregation allows for the averaging of measures across industries by region, which avoids large inaccuracies when measuring small or large industries in an economic impact study.

**Table 5: Industries and Sectors Modeled for On-Airport Economic Impacts**

Industries and Sectors		
Accounting	Couriers and Messengers	Real Estate
Agricultural/Forestry Support	Elementary and Secondary Schools	Retail - Building and Garden Materials/Supplies
Air Transportation	Federal Government/Military	Retail - Non-store
Amusement and Recreation Industries	Health Care Services	Retail - Sporting Goods/Hobby/Book Stores
Architecture and Engineering	Individual/Family Services	Support Activities for Transportation
Business and Professional Association	Life Insurance	Travel Agents
Car Rentals	Machinery and Equipment Repair	Warehousing and Storage
Coal Mining	Motion Picture and Video Industries	Waste Management/Remediation
Colleges/Universities	Natural Gas Distribution	Wholesale - Machinery, Equipment, and Supplies
Conveyor Equipment Manufacturing	Non-profits	

Source: EBP US using IMPLAN V.3 2018, 2020

#### 1.6.1.2 Off-Airport Visitor Spending

As presented in previous sections, visitor spending data in the WV AEIS came from commercial visitor and GA visitor survey responses and from data collected from Longwoods International.

**Table 6** presents the five key visitor spending categories and their associated industries and sectors used in IMPLAN to categorize typical out-of-state visitor spending. Categories of spending are purposefully generalized to present visitors with surveys that they can and are willing to quickly answer.

The distribution of commercial visitor spending across the spending categories was based on the pattern identified at CRW via the Commercial Air Passenger Survey. For GA visitor spending at LWB, the allocation across spending categories was derived from survey responses for that

airport. For all other GA airports, the visitor spending profile by category was based on GA visitor spending survey responses for all other GA airports, excluding LWB. When assigning GA visitor spending to categories, accommodations were excluded from the profile for all airports for which per trip per visitor spending levels were less than \$70, based on the assumption that these trips did not involve overnight stays.

**Table 6: Industries and Sectors Modeled for Off-Airport Visitor Spending Classifications**

Visitor Spending Categories	Industries and Sectors	
<b>Accommodations</b>	Hotels and Motels (Including Casino Hotels)	Other Accommodations
<b>Entertainment</b>	Performing Arts Companies	Commercial Sports (Except Racing)
	Racing and Track Operation	Independent Artists, Writers, and Performers
	Museums, Historical Sites, Zoos, and Parks	Amusement Parks and Arcades
	Gambling Industries (Except Casino Hotels)	Other Amusement and Recreation Industries (Including Skiing)
	Fitness and Recreational Sports Centers	Bowling Centers
<b>Food &amp; Beverage</b>	Full-service Restaurants	Limited-service Restaurants
	All Other Food and Drinking Places	
<b>Ground Transportation</b>	Transit and Ground Passenger Transportation	Transportation Support Activities
	Automotive Equipment Rental and Leasing	
<b>Retail</b>	Retail - Electronics and Appliance Stores	Retail - Food and Beverage Stores
	Retail - Health and Personal Care Stores	Retail - Clothing and Clothing Accessories Stores
	Retail - Sporting Goods, Musical Instruments, and Books	Retail - General Merchandise Stores
	Retail - Miscellaneous Store Retailers	

Source: EBP US using IMPLAN V.3 2018, 2020

## 1.7 Summary

The methodology used in the development of the WV AEIS relied on gathering information about on-airport activity and off-airport visitor spending to create a foundation of direct impacts. These direct impacts were then incorporated into the IMPLAN economic model to apply multiplier impacts at regional and statewide levels. The results of this process produced the total economic impacts of aviation in West Virginia, presented in detail in **Chapter 3. Economic Impact Findings**.

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## CHAPTER 2. THE DATA COLLECTION PROCESS

### 2.1 Introduction

As introduced in **Chapter 1. Introduction and Methodology**, a multi-pronged data collection effort was necessary to capture the aviation activity generating economic impact in West Virginia. With 2019 serving as the base year for the West Virginia Aviation Economic Impact Study (WV AEIS) on-airport and off-airport data were collected. On-airport data include employment and capital improvement expenditures made by airports and their tenants, while off-airport data include visitor spending by out-of-state visitors arriving to West Virginia via the state's commercial service and general aviation (GA) airports. Five surveys were developed and deployed to gather the information required to quantify on- and off-airport impacts:

- **Airport Manager Survey:** respondents included airport managers, airport administration staff, board members, and municipal finance staff.
- **Airport Tenant Survey:** respondents included fixed-base operators (FBOs), concessionaires, rental car agencies, flight schools, aircraft maintenance, and other businesses located on an airport's property.
- **Commercial Air Passenger Survey:** respondents included passengers arriving from out of state through one of West Virginia's seven commercial service airports.
- **Transient GA Pilot & Passenger Survey:** respondents included passengers arriving from out of state on private aircraft through one of the state's 24 public-use airports.
- **Aviation-Reliant Business & Business Aircraft Owner Survey:** respondents included businesses that are not located on airport property but rely on West Virginia's airports to conduct business. Also included are businesses that own aircraft based at one of the 24 study airports.

Hard-copy and electronic versions of the surveys were utilized as appropriate depending on the audience. These surveys were distributed to their intended survey populations beginning in July 2020 during airport site visits. To make surveys as accessible as possible, many surveys included the use of quick-response (QR) codes which directly linked the user to online versions of the surveys (in SurveyMonkey) if they preferred. Additionally, a dedicated WV AEIS project website was created to further communicate the purpose of the study, provide status updates, and facilitate public access to the surveys. The following sections provide additional details on the purpose, approach, and key data gathered from each of these five surveys.

### 2.2 Airport Manager Survey

The Airport Manager Survey was the first to be deployed as airport manager input was required to deploy several of the other surveys. The survey requested information on airport employment, payroll, operating expenditures, and capital improvement expenditures. Additionally, the survey obtained contact information for airport users including tenants, aviation-reliant businesses, and businesses with based aircraft. It was this contact information that was critical to the deployment of the Airport Tenant Survey and the Aviation-Reliant Business & Business Aircraft Owner Survey.

### 2.2.1 Approach

Before site visits were conducted at each of the study airports, a webinar was held with airport managers and representatives to communicate the purpose of the WV AEIS, provide an overview of the information requested in the survey, share details on how and why site visits were being conducted, and what airports could expect to receive when the study concluded. After the webinar, an individualized, pre-populated Airport Manager Survey was sent to each of the 24 airports included in the study. Each manager was asked to review and complete the survey to the best of their ability in advance of a site visit to their facility. All 24 airport site visits were scheduled and conducted during July 2020, each lasting approximately two hours.

The survey included six sections:

1. General airport information (contact information, types of activity, etc.)
2. Airport-sponsored employment, expenditures, and revenues generated in calendar year (CY) 2019
3. Estimated transient (out-of-state) visitor trip information
4. Descriptions of special activities, unique attributes, and community benefits of the airport
5. Estimated impacts of the Coronavirus Disease 2019 (COVID-19) on airport operations in comparison to the previous year
6. Names and contact information for on-airport tenants, businesses with based aircraft at the airport, and local and non-local businesses reliant on their airport

During site visits, information provided by airport managers was verified and missing survey data were completed. Many airport managers provided a tour of their facilities and identified airport tenants for additional follow-up. In some cases, additional follow-up was required as managers did not have access to the information being requested or needed to check with other staff not present at the site visit. Follow-up efforts resulted in complete datasets being provided by airport managers.

### 2.2.2 Key Data

The Airport Manager Survey was the longest and most comprehensive survey for the WV AEIS, requesting information on a variety of topics for CY 2019. The following outline presents the topics covered on this survey:

- General airport information
  - Airport administration contact information
  - Types of aviation services
  - Types of airport activity
  - Overview and elaboration of airport activities
- Economic impact (all CY 2019 except where noted)
  - Airport-sponsored employees by occupational role
  - Outsourced or contract employment
  - Expenditures
    - Annual wages and benefits paid to all airport-sponsored employees
    - Contractor costs
    - Capital improvement expenditures (2016-2019)
    - Operating expenses

- Revenue generation
- Airport visitors
  - Percentage of GA transient (non-local) operations
  - Average number of passengers (including pilots) and average length of stay for each GA transient operation
- Impacts of COVID-19
  - Scale of overall impacts of COVID-19 on the airport (financial, operational, etc.)
  - Reduction of revenues, if any, date of decline, and estimated percent change compared to 2019
  - Impacted sectors of airport activity (CS, GA, recreational, business, etc.) and if specific to aircraft type (e.g. piston or jet aircraft)
  - Changes in overall operation activity for CS and GA
  - Potential impacts of state grant program reductions on the airport budget
  - Requested or granted rent abatement or deferrals for airport tenants
  - Percentage of tenants that have applied for/requested assistance
  - Changes to on-airport employment
  - Other adverse effects of COVID-19 on the airport
- Contact information and employment estimates for each on-airport tenant
- Contact information and employment estimates for each off-airport business that bases aircraft at the airport
- Contact information for each non-local business that relies on the airport
- Contact information for each local business that relies on the airport

## 2.3 Airport Tenant Survey

Airport tenants are a significant driver of economic activity generated on and by an airport. To determine the extent of their impact, business-specific information was sought, including employment, payroll, and expenditures. Due to the sensitive and confidential nature of some of these data, not all information is presented in this study in an effort to protect the privacy of individual business owners. However, an aggregated airport total is presented to capture and summarize the total impact of each study airport and the airport network as a whole.

The number and type of tenants present at an airport varied between larger airports located in more urban or developed communities and smaller, rural airports. Five airports reported having no tenants while two airports having more than 20 tenants representing a wide range of industries. Among rural airports in West Virginia, the most common tenants provided emergency aerial medical services and aerial inspections or surveying. Tenants at larger airports included aerospace companies, military, airline operators, and many more.

### 2.3.1 Approach

Airport tenants were identified by managers on their airport manager surveys. To the best of their knowledge, airport managers provided contact information and employment estimates for each of their tenants. During the airport site visits, an Airport Tenant Survey was distributed to each tenant available during the time of the visit. Tenants that were not available were emailed a transmittal letter from the West Virginia Aeronautics Commission (WVAC) and a Portable Document Format (PDF) of the survey along with a link to an online version for completion.

The most important pieces of information necessary to calculate the economic impact of each tenant are: 1) employment numbers and 2) type of business. While it is highly desirable to have all tenants return a completed survey, several did not respond despite several rounds of emails and phone calls. Of more than 140 tenants identified, 84 completed and returned a tenant survey. When a tenant did not complete a survey, data provided by the airport manager regarding tenant employment and business type were used. If these estimates were not available from the airport manager survey, ESRI's Community Analyst and ReferenceUSA were used to gather the necessary tenant data.

Once all required tenant data were obtained, findings were compiled by airport and (including tenant name, business type, and employment) and sent to each airport manager for confirmation. Upon confirmation, IMPLAN was used to estimate payroll and business revenues for tenants that did not provide this information. Estimates were reviewed with WVAC prior to finalizing.

#### 2.3.1.1 Key Data

The topics addressed on the survey included:

- Business/company contact information
- Type of industry/business
- Number of full-time and part-time employees
- Expenditures
  - Annual wages and benefits paid to all employees
  - Real estate taxes
  - Capital improvement expenditures (2016-2019)
- Any additional economic benefits/services that the business provides to the community
- Impacts of COVID-19
  - Scale of overall impacts of COVID-19 on business (financial, operational, etc.)
  - Decline in operations and revenue, if any, and estimated date of decline and degree
  - Reduction in employment, if any, to what degree and status (permanent or temporary)

## 2.4 Commercial Air Passenger Survey

Seven commercial service airports act as a gateway for domestic and international travelers to enjoy the unique experiences West Virginia has to offer. These airports facilitate scheduled air service to 20 destinations that connect travelers to thousands of domestic and international destinations.

A Commercial Air Passenger Survey was developed to understand the spending patterns of visitors and to develop a visitor spending profile to be used in the calculation of airport impacts.

The distinction between out-of-state visitors and West Virginia residents traveling within the state

(or traveling home from out-of-state) is important as only the expenditures from true visitors to West Virginia should be counted as it represents money coming into the state from elsewhere.

### **2.4.1 Approach**

In coordination with the West Virginia Office of Tourism, 2018 commercial service visitor data were obtained from Longwoods International, a travel and tourism-centric market research consultancy. These data obtained from Longwoods provided an initial spending profile of out-of-state visitors to West Virginia. This spending was adjusted to 2019 dollars to match the base year for this study. To supplement these data, commercial service airports were asked to participate in deploying an online version of the Commercial Air Passenger Survey on their airport website and/or on the airport's Wi-Fi gateway page. Yeager Airport (CRW), Tri-State/Milton J. Ferguson Field (HTS), and Morgantown Municipal - Walter L. Bill Hart Field (MGW) airports participated in collecting commercial service visitor data. Data collection efforts for commercial service visitors occurred over a six-month period from July to December in 2020.

Due to the impacts of COVID-19 on commercial air passenger behaviors, survey responses were used to provide a comparative analysis between 2019 and 2020 visitor spending. After filtering outlier survey responses, 218 unique commercial air passenger responses were collected and used to show both quantitative and qualitative impacts of COVID-19 on out-of-state traveler behaviors in 2020. Surprisingly, the spending profile was very similar between years despite initial predictions that the amount being spent by visitors would be dramatically reduced in 2020.

#### **2.4.1.1 Key Data**

The topics addressed on the survey included:

- Airport at which the survey was initiated
- City/state of primary residence
- Number of nights spent in West Virginia
- Number of persons in traveling party
- Expenditures made in West Virginia (outside the airport)
- Purpose of trip (business, convention, personal, etc.)
  - If business related, the product or service provided by their company or the company they are visiting
- Travel contingency plans had the airport used been unavailable for use

## **2.5 Transient GA Pilot & Passenger Survey**

GA airports accommodate a wide variety of uses including business and leisure flying, aerial surveying, medical evacuation operations, and many more. Similar to the Commercial Air Passenger Survey, the Transient GA Pilot & Passenger Survey was solely focused on developing a spending profile for out-of-state visitors (referred to as transient) arriving via GA to the state's 24 airports.

### **2.5.1 Approach**

During site visits, each airport was provided with hard-copy surveys and a survey collection box and poster advertising the WV AEIS and the importance of their participation in the visitor surveys. These GA visitor survey materials were placed in high-traffic, highly-visible locations at each airport such as lobby desks at FBOs, airport restaurants, waiting areas, etc. The posters and



hard-copy surveys included a QR code which linked survey respondents to the online version of the survey (via SurveyMonkey) for ease of completion.

A total of 91 unique GA visitor survey responses were collected via the hard-copy and online survey formats. Similar to the Commercial Air Passenger Survey, only responses from out-of-state visitors were used.

### 2.5.1.1 Key Data

The topics addressed on the survey included:

- Airport at which the survey was initiated
- City/state of primary residence
- Number of nights spent in West Virginia
- Number of persons in traveling party
- Expenditures made in West Virginia (outside the airport)
- Purpose of trip (business, convention, personal, etc.)
  - If business related, the product of service provided by their company or the company they are visiting
- Travel contingency plans had the airport used been unavailable for use

## 2.6 Aviation-Reliant Business & Business Aircraft Owner Survey

Air transportation is vital to the facilitation of business and economic activity in West Virginia as it allows for the quick movement of goods and people (e.g. shipment of raw materials or transportation of staff to a client site). Manufacturing, mining, aerial landscaping, power line inspection, and many other types of businesses rely on West Virginia airports to conduct business. Information about businesses that depend on aviation and those that base aircraft used for business purposes are important to understanding the statewide economic benefit of the airports. Additionally, data collected from these businesses are critical to understanding the factors which influence a business' decision to locate in the state and the types of businesses that rely on the airports.

### 2.6.1 Approach

Aviation-reliant businesses and businesses with based aircraft were identified from completed Airport Manager Survey responses. Airport managers provided contact information and the type of business to the best of their ability. Secondary sources were used as a supplement when managers didn't provide complete information. Each business that was successfully identified was emailed a transmittal letter from the WVAC and a PDF of the Aviation-Reliant Business & Business Aircraft Owner Survey along with a link to an online version for completion. Following the initial transmission of the electronic survey, several rounds of email and phone outreach were conducted in an effort to encourage maximum survey participation.

Airport Manager Survey responses identified 250 aviation-reliant businesses and businesses with based aircraft. Only 33 businesses participated in the survey despite all follow-up efforts. These survey responses provide more qualitative information about the critical importance of airports as it pertains to business activity in West Virginia.

### 2.6.1.1 Key Data

The topics addressed on the survey included:

- Business/company contact information
- Number of full-time and part-time employees
- Business use of aviation (commercial service and GA, passenger travel, and cargo transport, etc.)
- Influence of business location factors (highway access, cost of living, trained workforce, etc.)
- Which West Virginia airports need improvements made to them (facilities, services, commercial flights, freight access, etc.)
- Final thoughts on the ability of West Virginia's airports to support business needs

## 2.7 Summary

A total of five surveys were developed and distributed to airport and aviation users across the state to gather pertinent data on their use and reliance on West Virginia's aviation system. This data was vital to the calculation of the economic impact of the state's 24 study airports, explored in detail in **Chapter 3. Economic Impact Findings.**

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## CHAPTER 3. ECONOMIC IMPACT FINDINGS

### 3.1 Introduction

The West Virginia Aeronautics Commission (WVAC) elected to develop the West Virginia Aviation Economic Impact Study (WV AEIS) in order to identify the economic contribution associated with the state's 24 study airports. **Chapter 1. Introduction and Methodology** and **Chapter 2. The Data Collection Process** lay the foundation necessary to present the economic impact of West Virginia's aviation system in this chapter. Quantitative impacts are generated from three main sources:

- **On-Airport Activity:** Airports serve as regional job centers that provide employment opportunities to serve airlines or airline passengers, general aviation (GA) activities and services, facility operation, and more. Additionally, economic activity is spurred at airports through capital expenditures for construction for the airport as well as business tenants such as concessionaires, fixed-base operators (FBOs), and more. To maintain consistency among airports in this study, on-airport activity is defined by what is on/at the airport and does not account for off-airport businesses.
- **Visitor Spending:** Airports act as gateways for out-of-state visitors arriving to West Virginia for business and pleasure. These visitors coming to the state via a commercial service or GA airport spend money on lodging, food, retail, entertainment, and/or local transportation, all of which supports West Virginia's hospitality industry.
- **Air Cargo:** Airports serve as an essential link between West Virginia's industries and distant markets. Not only do they support the reach of local businesses, but these air-cargo-enabled sales support additional employment and revenue in West Virginia.

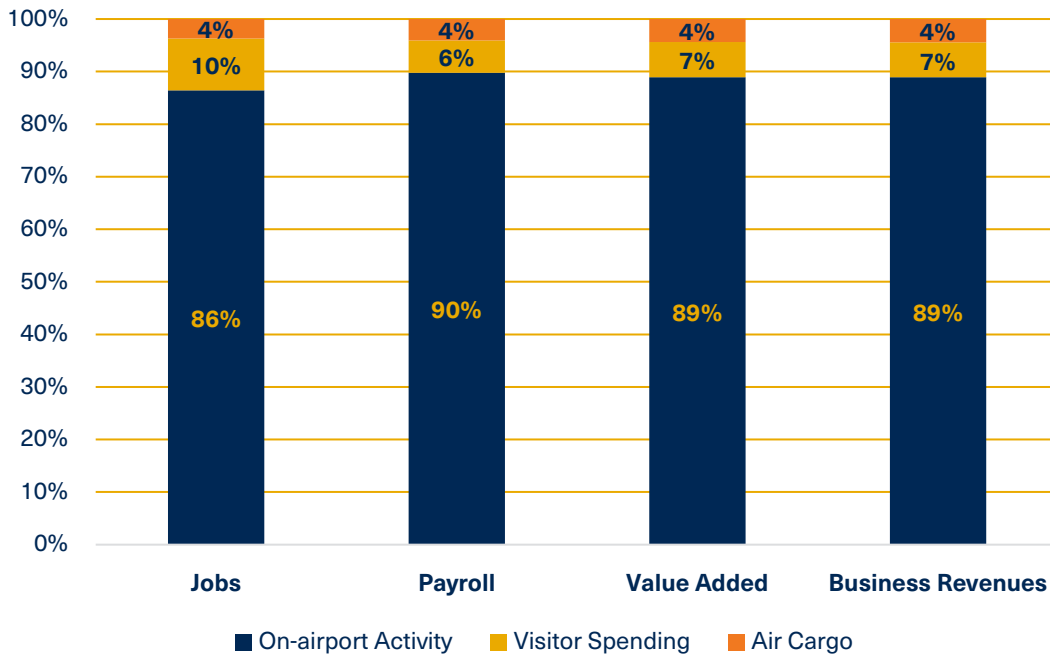
**Table 1** presents a summary of the economic impact attributed to West Virginia airports by source and indicator. The figures presented in this table include the multiplier effects of supplier sales and income re-spending. As shown, there are over 10,700 jobs supported by West Virginia airports, resulting in approximately \$550 million in payroll, \$816 million in value added, and nearly \$1.63 billion in business revenues. **Figure 1** demonstrates the share of impacts by source for each of the economic impact indicators. As shown, on-airport activity is responsible for 86 percent or more of the total impact for each indicator.

**Table 1: Summary of Aviation Economic Impacts by Source (including Multiplier Effects)**

Type	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	9,271	\$493,845,000	\$725,997,000	\$1,446,134,000
Visitor Spending	1,063	\$34,035,000	\$54,963,000	\$107,248,000
Air Cargo	396	\$22,232,000	\$35,534,000	\$72,420,000
<b>Total</b>	<b>10,729</b>	<b>\$550,112,000</b>	<b>\$816,493,000</b>	<b>\$1,625,805,000</b>

*Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

**Figure 1: Share of Economic Impacts by Indicator**



Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

For additional statewide context, **Table 2** presents West Virginia’s total economic output by indicator and compares it to the economic impacts attributable to aviation. As shown, West Virginia airports support roughly one percent of the state’s economy.

**Table 2: Aviation’s Contribution to West Virginia’s Economy**

Measure	State Economy	Total Aviation Impacts	Percent of Economy Supported by Aviation
Jobs	895,190	10,729	1.2%
Payroll	\$47,039,773,000	\$550,112,000	1.2%
Value Added	\$78,863,900,000	\$816,493,000	1.0%

Sources: United States (U.S.) Bureau of Economic Analysis (BEA), 2019, for payroll, value added and jobs; Business revenues are from data assembled by IMPLAN V.3 2018 and adjusted to 2019 using the BEA price deflator

The following sections present the quantitative impacts generated by aviation activity by source (on-airport activity, visitor spending, air cargo), by category (direct, supplier sales, income re-spending), and by region. Also included are an assessment of tax impacts of this aviation activity and the impacts of Coronavirus Disease 2019 (COVID-19) on West Virginia’s aviation system.

### 3.2 Impacts by Source

Detailed assessments of economic impacts by source are provided in the following sections, including direct impacts, and those generated by supplier sales and income re-spending.

### 3.2.1 On-Airport Activity

Airports are considered economic generators because they support jobs and income associated with air travel and other aviation services. On-airport activity is categorized into three main service types:

- **Airport Administration:** Includes airport operations, management, and the budget associated with operating the airport, which may include facility and grounds maintenance and/or other administrative needs.
- **Airport Tenants (at commercial service and GA airports):** Includes airlines; FBOs; maintenance, repair and overhaul companies (MROs); avionics; and other aircraft service companies located on an airport. Airport tenants can also be related to non-aviation industries, such as on-airport warehouses, distribution centers, hotels, and other types of businesses that pay rent or fees to the airport and have an establishment (with employees) on the airport property. Airport tenants can also include ground transportation providers, such as rental car or taxi companies. Air cargo facilities, such as FedEx, UPS, and others, that are located on-airport are also considered airport tenants.
- **Capital Improvements:** Includes on-airport construction projects whether directly related to the airport or tenant facilities.

**Table 3** presents the economic impacts of on-airport activity by category (direct, supplier sales, and income re-spending) and by economic indicator (jobs, payroll, value added, and business revenues). As shown, direct on-airport activity at West Virginia system airports generates roughly \$1 billion dollars in business revenues. When combined with over \$400 million from multiplier impacts of supplier sales and income re-spending, almost \$1.5 billion in business revenues is added to the state economy because of on-airport activity each year. This activity also accounts for more than 9,200 jobs, resulting in approximately \$500 million in payroll, supporting an average salary per worker of approximately \$53,000. In total, nearly three-quarters of a billion dollars is contributed to West Virginia's Gross State Product (GSP).

**Table 3: Economic Impacts of On-Airport Activity at West Virginia's Study Airports**

Type	Jobs	Payroll	Value Added	Business Revenues
Direct	6,412	\$364,910,000	\$530,293,000	\$1,042,534,000
Supplier Sales	756	\$41,053,000	\$64,315,000	\$126,912,000
Income Re-spending	2,102	\$87,883,000	\$131,388,000	\$276,691,000
<b>Total</b>	<b>9,271</b>	<b>\$493,846,000</b>	<b>\$725,996,000</b>	<b>\$1,446,137,000</b>

*Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

### 3.2.2 Visitor Spending

Out-of-state travelers have many reasons to visit West Virginia, whether for business or recreation. These visitors rely on both commercial service and GA airports to arrive at their destinations safely and, once in the state, they spend money in the local economy. Typically, visitors spend their money in the following categories while traveling:

- **Accommodations**
- **Entertainment**
- **Food and beverage**
- **Local ground transportation**
- **Retail**

The following sections provide a detailed look at the spending amounts and patterns by out-of-state visitors arriving via West Virginia's commercial and GA airports.

#### 3.2.2.1 Commercial Service Airport Visitor Spending

There are seven airports in West Virginia that provide commercial airline services. Passengers traveling through these airports can be separated into three general types:

1. West Virginia residents traveling out-of-state or to a destination within West Virginia.
2. Out-of-state travelers who may stop in at a West Virginia airport as part of a layover or connection on the way to their ultimate destination. Typically, these travelers do not leave the airport.
3. **Out-of-state domestic or international travelers who are visiting West Virginia, whether for business or leisure.**

It is the third type of passenger whose spending is accounted for this analysis. Passengers in groups one and two are not counted in this analysis because either a) they are residents and therefore not bringing new money to the West Virginia economy or b) are not spending money in West Virginia communities because they do not leave the passenger terminal between connecting flights. If passengers from groups one or two spend money at a West Virginia airport that money is counted in the impacts of on-airport businesses.

Visitor spending associated with commercial service airports is a function of group three passengers and the amount of money those visitors spent, which was developed from data from Longwoods International provided by the West Virginia Tourism Office (more information about this survey is included in **Chapter 1. Introduction and Methodology** and **Chapter 2. The Data Collection Process**) and results of the Commercial Air Passenger Survey.

**Table 4** presents the total spending by out-of-state visitors arriving to West Virginia via commercial service airports in the state. It is important to note that this table presents "gross spending," which means it is counting the dollars that leave the visitors' pockets before retail margins are applied. Visitor spending attributable to all commercial service airports in West Virginia is approximately \$49 million.

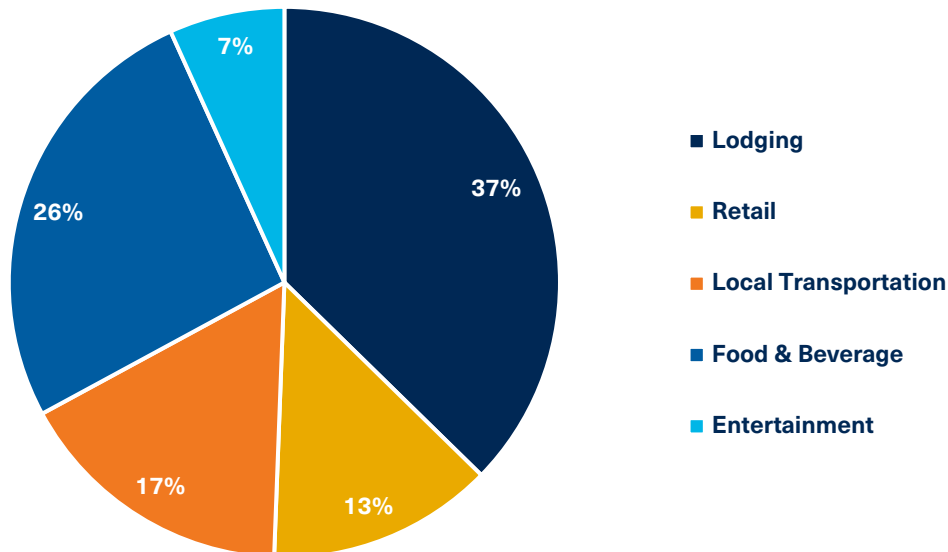
**Table 4: Visitor Spending at West Virginia’s Commercial Service Airports**

Associated City	Airport Name	FAA ID	2019 Visitors	2019 Spending per Visitor	Total Spending*
<b>Beckley</b>	Raleigh County Memorial	BKW	4,287	\$210	\$899,000
<b>Charleston</b>	Yeager	CRW	87,543	\$386	\$33,756,000
<b>Clarksburg</b>	North Central West Virginia	CKB	10,942	\$401	\$4,383,000
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	32,134	\$156	\$5,021,000
<b>Lewisburg</b>	Greenbrier Valley	LWB	5,916	\$430	\$2,545,000
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	3,730	\$400	\$1,493,000
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	2,541	\$298	\$756,000
<b>Total</b>			<b>147,093</b>	<b>N/A</b>	<b>\$48,854,000</b>

Notes: \*Prior to accounting for retail margining. Totals may not sum exactly due to rounding. Sources: WV AEIS Commercial Air Passenger Survey, 2020; Calculations by EBP US, 2021

**Figure 2** shows the profile of spending by visitors using commercial service to reach the state. As shown, lodging accounts for the majority of spending, at 37 percent. Twenty-six percent of the money spent by commercial service passengers went to food and beverage and 17 percent went to local transportation. The remaining 20 percent was spent on retail (13 percent) and entertainment (seven percent).

**Figure 2: Commercial Service Visitor Spending Profile**



Sources: WV AEIS Commercial Air Passenger Survey, 2020; Longwoods International provided by the West Virginia Office of Tourism; calculations by EBP US, 2021

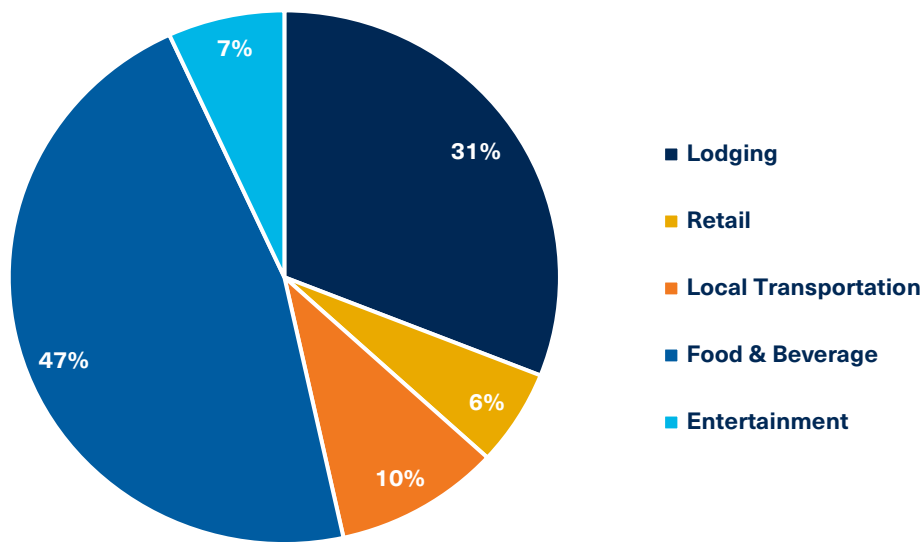


### 3.2.2.2 General Aviation Visitor Spending

All of the airports in the West Virginia system support GA activity. Similar to the commercial service visitor spending impacts analysis, only out-of-state visitors arriving to West Virginia via GA airports were accounted for in this analysis. These GA visitors arrive on what is referred to as “transient operations” and are considered true visitors as they bring money in from out-of-state by spending in West Virginia communities. As presented in **Chapter 1. Introduction and Methodology**, GA visitor spending amounts varied by airport based on location, nearby activities and businesses, and type of traveler. Average daily visitor spending ranged from \$49 to \$394 based on each airport’s National Plan of Integrated Airport Systems (NPIAS) classification.

As shown in **Figure 3**, the spending profile for GA visitors differs from that of visitors using commercial service. GA visitors spent the most money on food and beverage at 47 percent. Lodging accounted for 31 percent, which is less than that spent by commercial service visitors. This difference reflects the fact that not all GA visitors stay overnight. Ten percent of the money spent by GA visitors went towards local transportation, seven percent went to entertainment (same as commercial service visitors), and six percent went to retail spending.

**Figure 3: GA Visitor Spending Profile**



Sources: WV AEIS Transient GA Pilot & Passenger Survey, 2020; Longwoods International provided by the West Virginia Office of Tourism; calculations by EBP US, 2021

### 3.2.2.3 Economic Impacts of Visitor Spending

In 2019, out-of-state visitors arriving by commercial service and GA airports spent approximately \$70 million in West Virginia’s economy. Considering the multiplier effects of supplier sales and income re-spending, this spending supported over 1,000 jobs statewide. **Table 5** presents the total impacts of visitor spending by passengers arriving in West Virginia via the 24 study airports. As a result of the approximately 1,000 jobs generated from visitor spending, there is approximately \$34 million in payroll generated, and \$55 million in value added being contributed annually to the state’s economy.

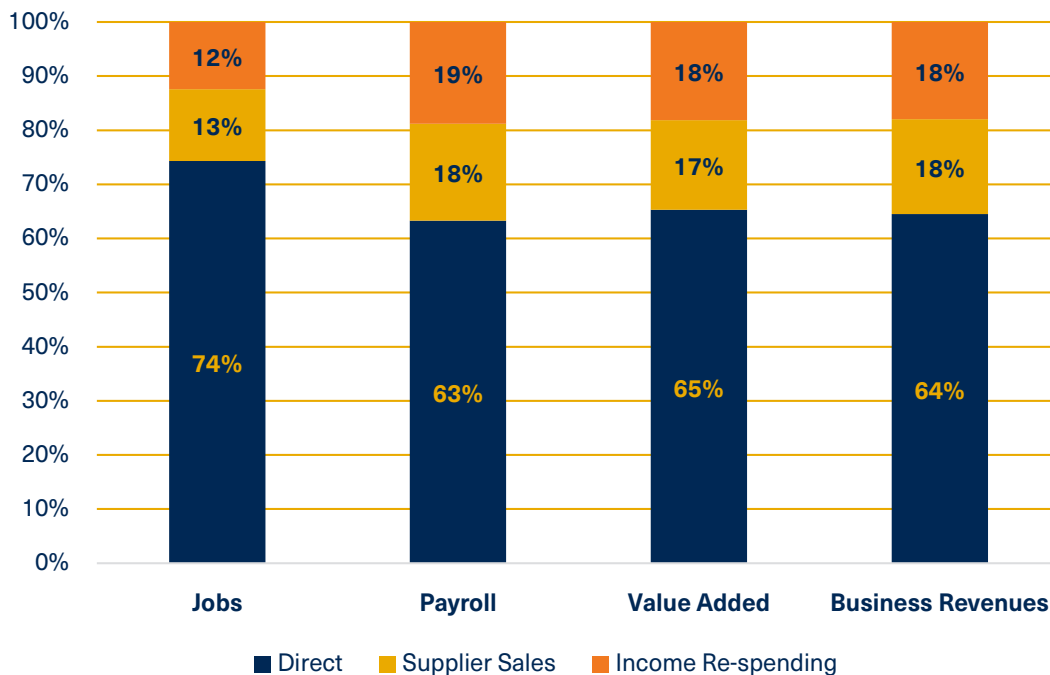
**Table 5: Economic Impacts of Visitor Spending at West Virginia’s Study Airports**

Type	Jobs	Payroll	Value Added	Business Revenues
Direct	790	\$21,553,000	\$35,896,000	\$69,163,000
Supplier Sales	141	\$6,079,000	\$9,092,000	\$18,858,000
Income Re-spending	132	\$6,403,000	\$9,975,000	\$19,226,000
<b>Total</b>	<b>1,063</b>	<b>\$34,035,000</b>	<b>\$54,963,000</b>	<b>\$107,248,000</b>

Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

Figure 4 presents the direct visitor spending impacts as a share of total visitor spending impacts. As shown, 63 percent or more of the total impacts associated with visitor spending is attributable to direct spending.

**Figure 4: Direct Visitor Spending Impacts as a Share of Total Visitor Spending Impacts**



Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

### 3.2.3 Air Cargo

West Virginia airports play an important role in the state’s economy by enabling manufacturers and other businesses to receive material inputs and transport commodities and finished goods to customers in various markets. Air cargo in this analysis accounts for the off-airport activities that are supported by airports via the air cargo services they provide. The direct air cargo impacts associated with West Virginia’s airports total just over \$47 million in business revenues. When accounting for the multiplier effects of supplier sales and income re-spending, the total contribution of air cargo to the state’s economy includes almost 400 jobs, \$22 million in payroll, \$35 million in value added, and over \$72 million in business revenues, as shown in **Table 6**. See **Appendix C. Economic Reliance of West Virginia Businesses on Aviation** for more

information on air cargo in the state and to learn how other businesses and industries rely on aviation in West Virginia.

**Table 6: Economic Impacts of Air Cargo at West Virginia's Study Airports**

Type	Jobs	Payroll	Value Added	Business Revenues
Direct	231	\$14,311,000	\$21,947,000	\$47,354,000
Supplier Sales	74	\$3,986,000	\$6,407,000	\$12,418,000
Income Re-spending	91	\$3,935,000	\$7,180,000	\$12,648,000
<b>Total</b>	<b>396</b>	<b>\$22,232,000</b>	<b>\$35,534,000</b>	<b>\$72,420,000</b>

*Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

### 3.3 Impacts by Category

The following sections present total economic impacts of on-airport activity and visitor spending by category: direct, supplier sales, and income re-spending. Note that the totals in this section do not account for impacts of air cargo, as those are calculated on a statewide basis and are not presentable by airport.

#### 3.3.1 Direct Impacts by Airport

**Table 7** presents the direct impacts for each airport for the four economic indicators: 1) jobs, 2) payroll, 3) value added, and 4) business revenues. Airports are listed in descending order by direct business revenues. The airports with the top 10 highest direct business revenues account for 97 percent of the system's total direct impacts. The top two airports, North Central West Virginia (CKB) and Yeager Airport (CRW) account for approximately 70 percent of the system's total direct business revenue impacts, 51 percent of jobs, 51 percent of payroll, and 58 percent of value-added impacts. As a note, although CRW has more jobs, CKB has higher payroll, value-added, and business revenues, due to the type of jobs present at the airport, many of which are related to the aerospace industry.

**Table 7: Direct Economic Impacts at West Virginia's Study Airports**

Associated City	Airport Name	FAA ID	Jobs	Payroll	Value Added	Business Revenues
Clarksburg	North Central West Virginia	CKB	1,325	\$119,566,000	\$222,517,000	\$626,109,000
Charleston	Yeager	CRW	2,363	\$78,361,000	\$104,565,000	\$142,095,000
Martinsburg	Eastern West Virginia Regional/Shepherd Field	MRB	1,697	\$72,362,000	\$82,723,000	\$95,201,000
Parkersburg	Mid-Ohio Valley Regional	PKB	604	\$62,001,000	\$74,062,000	\$94,028,000
Huntington	Tri-State/Milton J. Ferguson Field	HTS	315	\$14,781,000	\$22,006,000	\$40,210,000
Lewisburg	Greenbrier Valley	LWB	236	\$9,515,000	\$17,719,000	\$32,163,000
Morgantown	Morgantown Municipal - Walter L. Bill Hart Field	MGW	184	\$8,149,000	\$12,448,000	\$25,931,000
Beckley	Raleigh County Memorial	BKW	90	\$4,224,000	\$5,966,000	\$11,036,000
Elkins	Elkins-Randolph County - Jennings Randolph Field	EKN	79	\$3,884,000	\$5,623,000	\$9,054,000
Cumberland	Greater Cumberland Regional	CBE	57	\$2,003,000	\$2,880,000	\$5,690,000
Buckhannon	Upshur County Regional	W22	27	\$1,939,000	\$2,595,000	\$5,198,000
Wheeling	Wheeling Ohio County	HLG	52	\$1,876,000	\$2,613,000	\$5,084,000
Ravenswood	Jackson County	I18	31	\$1,961,000	\$2,399,000	\$4,612,000
Moundsville	Marshall County	MPG	30	\$2,290,000	\$2,729,000	\$4,595,000
Bluefield	Mercer County	BLF	50	\$1,530,000	\$2,325,000	\$4,294,000
Logan	Logan County	6L4	21	\$863,000	\$1,260,000	\$2,438,000
Fairmont	Fairmont Municipal - Frankman Field	4G7	9	\$341,000	\$609,000	\$1,807,000
Petersburg	Grant County	W99	13	\$267,000	\$410,000	\$912,000
Point Pleasant	Mason County	3I2	4	\$192,000	\$291,000	\$456,000
Philippi	Philippi/Barbour County Regional	79D	6	\$273,000	\$334,000	\$442,000
Sutton	Braxton County	48I	3	\$27,000	\$36,000	\$144,000
Williamson	Appalachian Regional	EBD	1	\$12,000	\$15,000	\$93,000
Pineville	Kee Field	I16	1	\$44,000	\$55,000	\$80,000
Summersville	Summersville	SXL	0	\$1,000	\$10,000	\$24,000

Note: Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities.  
Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

### 3.3.2 Supplier Sales/Income Re-spending Impacts

Multiplier effects consist of two different revenue streams:

- **Supplier Sales:** Sales generated by the purchase of goods/services by direct businesses (businesses that account for direct impacts) from other West Virginia businesses.
- **Income Re-spending:** Household spending from payroll earned by workers at businesses that generate direct and supplier sale effects.

**Table 8** presents the summary of multiplier effects relative to total economic impacts. Supplier sales contributed to the generation of 962 jobs, and income re-spending supported 2,334 jobs, totaling nearly 3,300 jobs from multiplier impacts. This activity also generated approximately \$150 million in payroll, \$230 million in value added, and nearly \$467 million in business revenues. Across the four economic indicators, multiplier effects account for 27 to 31 percent of the total economic impact, with an implied multiplier effect ranging from 1.37 to 1.44 depending on the economic indicator.

**Table 8: Multiplier Effects Share of Total Impacts**

Type	Jobs	Payroll	Value Added	Business Revenues
<b>Direct Impacts</b>	<b>7,434</b>	<b>\$400,774,000</b>	<b>\$588,137,000</b>	<b>\$1,159,051,000</b>
Supplier Sales	962	\$52,442,000	\$80,696,000	\$158,556,000
Income Re-spending	2,334	\$97,897,000	\$147,660,000	\$308,197,000
<b>Multiplier Impacts</b>	<b>3,296</b>	<b>\$150,339,000</b>	<b>\$228,356,000</b>	<b>\$466,753,000</b>
<b>Total Impacts</b>	<b>10,729</b>	<b>\$550,112,000</b>	<b>\$816,493,000</b>	<b>\$1,625,805,000</b>
Multiplier Effect as a Percentage of Total Impacts	31%	27%	28%	29%
Implied State Multiplier Effect	1.44	1.37	1.39	1.40

Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

Supplier sales and income re-spending impacts generated from direct airport-related activity support a number of industries across West Virginia's economy. **Table 9** presents the in-state jobs that are generated by industry because of supplier sales and income re-spending effects.

**Table 10** presents the business revenues that are generated by supplier sales and income re-spending by industry. The top 10 industries for each indicator are presented. Some industries, particularly real estate, professional, scientific and technical services, administrative and support services, and wholesale trade have some overlap in job and revenue impacts from both multiplier streams. In general, jobs that are generated from supplier sales typically support business-serving sectors, such as administrative and support services, professional, scientific, and technical services, and transportation support services, whereas income re-spending impacts population-serving industries, such as food services, ambulatory health care services, hospitals, social assistance, and real estate.

**Table 9: Jobs Generated by Supplier Sales and Income Re-spending**

Impacts from Supplier Sales in West Virginia		Impacts from Income Re-spending in West Virginia	
Industry	Jobs Generated	Industry	Jobs Generated
Administrative & Support Services	181	Food Services & Drinking Places	310
Professional, Scientific, & Technology Services	90	Ambulatory Health Care Services	260
Transportation Support Services	85	Hospitals	194
Wholesale Trade	63	Social Assistance	120
Food Services & Drinking Places	61	Administrative & Support Services	92
Real Estate	50	Religious, Civil, & Professional Organizations	91
Repair & Maintenance	48	Professional, Scientific, & Technological Services	85
Management of Companies & Enterprises	36	General Merchandise Stores	77
Couriers, Warehousing & Storage	29	Nursing & Residential Care Facilities	75
Truck Transportation	28	Real Estate	72
<b>Subtotal Top 10 Industries</b>	<b>671</b>	<b>Subtotal Top 10 Industries</b>	<b>1,376</b>
<b>Subtotal Other Industries</b>	<b>217</b>	<b>Subtotal Other Industries</b>	<b>867</b>
<b>Total</b>	<b>888</b>	<b>Total</b>	<b>2,243</b>

*Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

**Table 10: Business Revenues Generated by Supplier Sales and Income Re-spending**

Impacts from Supplier Sales in West Virginia		Impacts from Income Re-spending in West Virginia	
Industry	Business Revenues Generated	Industry	Business Revenues Generated
Wholesale Trade	\$16,254,000	Real Estate	\$53,713,000
Administrative & Support Services	\$13,712,000	Hospitals	\$31,988,000
Transportation Support Services	\$13,483,000	Ambulatory Health Care Services	\$30,442,000
Professional, Scientific, & Technological Services	\$11,638,000	Food Services & Drinking Places	\$19,646,000
Real Estate	\$9,361,000	Wholesale Trade	\$11,651,000
Transportation Equipment Manufacturing	\$8,852,000	Professional, Scientific, & Tech Services	\$11,215,000
Utilities	\$6,031,000	Insurance Carriers & Related Activities	\$11,054,000
Management of Companies & Enterprises	\$5,977,000	Religious, Civil, & Professional Organizations	\$9,242,000
Insurance Carriers & Related Activities	\$5,472,000	Monetary Authorities - Central Bank	\$7,626,000
Truck Transportation	\$4,979,000	Administrative & Support Services	\$7,070,000
<b>Subtotal Top 10 Industries</b>	<b>\$95,759,000</b>	<b>Subtotal Top 10 Industries</b>	<b>\$193,647,000</b>
<b>Subtotal Other Industries</b>	<b>\$50,379,000</b>	<b>Subtotal Other Industries</b>	<b>\$101,902,000</b>
<b>Total</b>	<b>\$146,138,000</b>	<b>Total</b>	<b>\$295,549,000</b>

Note: Totals may not sum exactly due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

### 3.3.3 Total Impacts by Airport

The airport-level total impacts from on-airport activity and visitor spending presented in **Table 11** include direct impacts (as presented in **Table 7**) and multiplier impacts of supplier sales and income re-spending across economic indicators (jobs, payroll, value added, and business revenues). Note that impacts from air cargo are not included in **Table 11** as they are calculated on a statewide basis and not at the airport level. Airports are organized in this table in descending order by business revenues. Similar to the data presented for direct impacts, the top 10 airports account for 97 percent of the state airports' business revenues. Combined, CKB and CRW account for 64 percent of business revenues, approximately 51 percent of statewide jobs, 52 percent of statewide payroll, and 57 percent of statewide value added impacts. As a note, Eastern West Virginia Regional/Shepherd Field (MRB) has higher direct impacts across all indicators than the direct impacts of Mid-Ohio Valley Regional Airport (PKB), however, when multiplier effects are included, PKB's business revenues are slightly higher than MRB. Both airports are fairly comparable in terms of the income re-spending impacts, but there are significant differences in supplier sale impacts between the two airports, which results in marginally higher business revenue impacts at PKB. Business revenues supported by supplier sales at PKB are \$15.3 million, whereas the business revenues supported by supplier sales at MRB are approximately \$8 million. For more information about multiplier impacts at the airport level, see **Appendix A. Data Tables**.

**Table 11: Total Economic Impacts at West Virginia's Study Airports**

Associated City	Airport Name	FAA ID	Jobs	Payroll	Value Added	Business Revenues
<b>Clarksburg</b>	North Central West Virginia	CKB	2,345	\$168,177,000	\$295,704,000	\$775,448,000
<b>Charleston</b>	Yeager	CRW	2,940	\$106,150,000	\$146,871,000	\$225,306,000
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	1,050	\$80,400,000	\$102,191,000	\$153,963,000
<b>Martinsburg</b>	Eastern West Virginia Regional/Shepherd Field	MRB	2,142	\$90,623,000	\$110,211,000	\$153,809,000
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	471	\$21,614,000	\$32,459,000	\$61,927,000
<b>Lewisburg</b>	Greenbrier Valley	LWB	365	\$15,260,000	\$26,652,000	\$50,505,000
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	293	\$13,184,000	\$20,226,000	\$41,782,000
<b>Beckley</b>	Raleigh County Memorial	BKW	141	\$6,452,000	\$9,352,000	\$18,033,000
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN	122	\$5,561,000	\$8,192,000	\$14,709,000
<b>Cumberland</b>	Greater Cumberland Regional	CBE	81	\$2,978,000	\$4,409,000	\$8,996,000
<b>Wheeling</b>	Wheeling Ohio County	HLG	74	\$2,914,000	\$4,183,000	\$8,273,000
<b>Buckhannon</b>	Upshur County Regional	W22	48	\$2,781,000	\$3,908,000	\$8,012,000
<b>Ravenswood</b>	Jackson County	I18	53	\$2,896,000	\$3,857,000	\$7,658,000
<b>Moundsville</b>	Marshall County	MPG	51	\$3,279,000	\$4,226,000	\$7,645,000
<b>Bluefield</b>	Mercer County	BLF	74	\$2,545,000	\$3,881,000	\$7,564,000
<b>Logan</b>	Logan County	6L4	29	\$1,231,000	\$1,839,000	\$3,650,000
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7	13	\$549,000	\$924,000	\$2,447,000
<b>Petersburg</b>	Grant County	W99	17	\$435,000	\$667,000	\$1,466,000
<b>Philippi</b>	Philippi/Barbour County Regional	79D	9	\$408,000	\$542,000	\$876,000
<b>Point Pleasant</b>	Mason County	3I2	6	\$274,000	\$420,000	\$711,000
<b>Sutton</b>	Braxton County	48I	4	\$61,000	\$87,000	\$253,000
<b>Williamson</b>	Appalachian Regional	EBD	2	\$37,000	\$52,000	\$168,000
<b>Pineville</b>	Kee Field	I16	2	\$64,000	\$85,000	\$141,000
<b>Summersville</b>	Summersville	SXL	0	\$7,000	\$19,000	\$43,000

Notes: This table does not include impacts of air cargo. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021



### 3.4 Regional Impacts

Thus far, economic impacts associated with aviation in West Virginia have been presented at the statewide and airport level. However, it is also important to recognize and assess the economic impacts of aviation on the regional level as airports play an important role in their respective regional economies. Economic impacts at the statewide level reflect the aggregation of airport level impacts across the state. Therefore, statewide impacts consider supplier sales and income re-spending activities that occur throughout West Virginia. In comparison, regional impacts reflect the impact of airports located within each region and supplier sales and income re-spending activities that occur within the boundaries of that region. For this assessment, the nine regions defined by the West Virginia Tourism Office were selected. See **Chapter 1. Introduction and Methodology** for more information on the tourism regions.

**Table 12** presents the total economic impact from on-airport activity and visitor spending, by indicator, for each of West Virginia's tourism regions in descending order of business revenues. Air cargo impacts are not included as those were calculated at the statewide level and could not be assigned by region. As shown, economic impacts in the Mountaineer Country region were the highest in terms of business revenues, with approximately \$812 million. The second highest is the Metro Valley region, with business revenues of approximately \$235 million. While the Metro Valley region is second in business revenues and payroll, it is first in jobs, with 2,996 jobs. This is reflective of the types of jobs created by airports in each region as some are higher paying positions and generate more business revenue than others.

**Table 12: Total Economic Impacts by Tourism Region**

Region	Jobs	Payroll	Value Added	Business Revenues
<b>Mountaineer Country</b>	2,618	\$180,994,000	\$314,700,000	\$812,369,000
<b>Metro Valley</b>	2,996	\$110,426,000	\$153,156,000	\$235,150,000
<b>Mid-Ohio Valley</b>	1,063	\$80,922,000	\$102,926,000	\$157,108,000
<b>Eastern Panhandle</b>	2,092	\$87,586,000	\$106,119,000	\$146,022,000
<b>Hatfield McCoy Mountains</b>	503	\$22,783,000	\$34,003,000	\$65,317,000
<b>New River-Greenbrier Valley</b>	450	\$18,321,000	\$30,654,000	\$57,038,000
<b>Potomac Highlands</b>	282	\$11,010,000	\$16,372,000	\$32,942,000
<b>Northern Panhandle</b>	202	\$10,148,000	\$14,645,000	\$29,610,000
<b>Mountain Lakes</b>	128	\$5,691,000	\$8,383,000	\$17,828,000

*Note: Economic impacts by region do not include air cargo impacts. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

### 3.5 Tax Revenue Analysis

Among other contributions made by airports to the regional and state economy, airport activities also contribute to tax revenues. Direct impacts of visitor spending, on-airport activity from tenants, and the sale of aviation fuel resulted in approximately \$75.5 million dollars in state and local tax revenues, as shown in **Table 13**.

**Table 13: Summary of State and Local Tax Revenue from All Sources and Airports**

Tax Source	Commercial	General Aviation	All Airports
Visitor Spending	\$2,771,600	\$1,227,400	\$3,999,000
Tenants	\$63,113,900	\$7,054,000	\$70,167,900
Aviation Fuel Tax	N/A	N/A	\$1,361,100
<b>Total</b>	<b>\$65,885,500</b>	<b>\$8,281,400</b>	<b>\$75,528,000</b>

*Notes: Totals may not sum exactly due to rounding. Aviation fuel tax data is unavailable for individual airports. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; WVAC; and state and local tax rates*

**Table 14** presents the summary of only the state tax revenues produced by all commercial service and GA airports, which includes tax revenues from visitor spending, tenants, and aviation fuel tax. As presented, the majority of the tax revenue is accrued to the state as opposed to local geographies. Also of importance is that the aviation fuel tax is only accrued at the state level.

**Table 14: Summary of State Tax Revenue from All Sources and Airports**

Tax Source	Commercial	General Aviation	All Airports
Visitor Spending	\$2,764,700	\$1,189,300	\$3,954,000
Tenants	\$62,643,300	\$6,981,300	\$69,624,600
Aviation Fuel Tax	N/A	N/A	\$1,361,100
<b>Total</b>	<b>\$65,408,000</b>	<b>\$8,170,600</b>	<b>\$74,939,700</b>

*Notes: Totals may not sum exactly due to rounding. Aviation fuel tax data is unavailable for individual airports. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; WVAC; and state tax rates*

**Table 15** shows a summary of only local tax revenues generated from visitor spending and tenant activity for all commercial service and GA airports.

**Table 15: Summary of Local Tax Revenue from All Sources and Airports**

Tax Source	Commercial	General Aviation	All Airports
Visitor Spending	\$6,900	\$38,100	\$45,000
Tenants	\$470,600	\$72,700	\$543,300
<b>Total</b>	<b>\$477,500</b>	<b>\$110,800</b>	<b>\$588,300</b>

*Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; WVAC; and local tax rates*

### 3.5.1 Tax Rates

**Table 16** shows the state and local tax rates used in the analysis. The following sections describe how these tax rates were used to estimate state and local tax revenue. Multiple sources were reviewed to determine the appropriate tax rate for each category presented in **Table 16**. Sales and use tax rates were sourced from the West Virginia State Tax Department’s website.<sup>1</sup> Information regarding personal and corporate income tax rates was sourced from West Virginia Business Tax document TSD-100<sup>2</sup>. The National Conference of State Legislatures<sup>3</sup> and the West Virginia State Legislature<sup>4</sup> websites were both sources of information regarding the rental car tax rate. The West Virginia Tax Department<sup>5</sup> was also reviewed for aviation fuel taxes.

**Table 16: State and Local Tax Rates in West Virginia**

Tax	Rate
Sales and Use Tax (state)	6% of sales price
Sales and Use Tax (local)	1% in select counties*
Personal Income Tax (state)	3-6.5% of taxable income
Corporate Income Tax (state)	6.5% of taxable income
Rental Car Tax (state)	\$1.00-1.50 per day**
Aviation Fuel Tax (state)	\$0.1520 per gallon***

Notes: \*Counties with an airport that have a municipal tax include Mercer, Ohio, Jackson, Marshall, and Wood. \*\*Midpoint of \$1.25 used for the analysis. Assumes average of \$86 per day spent on car rentals (according to industry sources). \*\*\*Applied to sales of aviation gas and aviation jet fuel. Sources: National Conference of State Legislatures, 2020; West Virginia State Tax Department, 2020

### 3.5.2 Visitor Spending

Visitors generate tax revenues by spending money in West Virginia. The following sections summarize tax revenues from out-of-state visitors arriving at commercial and GA airports. Sales and use tax revenues were estimated by applying the tax rates in **Table 16** to visitor spending.

Tax revenues generated by off-airport car rentals were estimated by applying the rate in **Table 16** to what visitors spent on ground transportation. An assumption was made that 82 percent of ground transportation spending by visitors is for rental cars, which is based on the rental car industry’s share of statewide output for the passenger transportation sector (according to data from the U.S. BEA assembled by IMPLAN). Rental car tax revenue is in addition to sales and use tax revenue.

#### 3.5.2.1 Commercial Airports

**Table 17** presents tax revenues generated by out-of-state visitors arriving at West Virginia’s seven commercial airports. This includes revenue from sales and use taxes and from the state’s rental car tax. Only PKB is in a county that has a municipal tax rate, which explains why it is the only airport that generated local sales and use tax revenue.

1 <https://tax.wv.gov/Business/SalesAndUseTax/MunicipalSalesAndUseTax/Pages/MunicipalSalesAndUseTax.aspx>

2 <http://tax.wv.gov/Documents/TSD/tsd100.pdf>

3 <https://www.ncsl.org/research/fiscal-policy/rental-car-taxes.aspx>

4 <http://www.wvlegislature.gov/WVCODE/ChapterEntire.cfm?chap=17A&art=3&section=4#3>

5 <https://tax.wv.gov/Documents/TaxForms/2020/MotorFuelRates.2020.pdf>

**Table 17: State and Local Tax Revenue Generated from Visitor Spending by Tax Category and Commercial Service Airport**

Associated City	Airport Name	FAA ID	Sales and Use Tax (state)	Sales and Use Tax (local)	Rental Car Tax (state)	Total
<b>Beckley</b>	Raleigh County Memorial	BKW	\$49,100	\$0	\$1,800	\$50,900
<b>Charleston</b>	Yeager	CRW	\$1,844,600	\$0	\$66,400	\$1,911,000
<b>Clarksburg</b>	North Central West Virginia	CKB	\$239,600	\$0	\$8,600	\$248,200
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	\$273,500	\$0	\$9,900	\$283,400
<b>Lewisburg</b>	Greenbrier Valley	LWB	\$138,900	\$0	\$5,000	\$143,900
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	\$81,600	\$0	\$2,900	\$84,500
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	\$41,300	\$6,900	\$1,500	\$49,700
<b>Total</b>			<b>\$2,668,600</b>	<b>\$6,900</b>	<b>\$96,100</b>	<b>\$2,771,600</b>

*Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Commercial Air Passenger Survey, 2020; and state and local tax rates*

**Table 18** presents the total tax revenue generated from out-of-state visitor spending at commercial service airports by spending category. The total for each commercial service airport and total for all commercial service airports includes state and local tax revenues and totals nearly \$2.8 million. Spending related to lodging yielded the highest tax revenues, approximately \$1.1 million, compared to other spending categories.

**Table 18: State and Local Tax Revenue Generated from Visitor Spending by Spending Category and Commercial Service Airport**

Associated City	Airport Name	FAA ID	Lodging	Restaurant	Ground Transportation	Entertainment	Retail	Total
<b>Beckley</b>	Raleigh County Memorial	BKW	\$20,100	\$14,100	\$10,700	\$3,700	\$2,300	\$50,900
<b>Charleston</b>	Yeager	CRW	\$755,900	\$529,200	\$400,600	\$137,300	\$88,100	\$1,911,100
<b>Clarksburg</b>	North Central West Virginia	CKB	\$98,200	\$68,700	\$52,000	\$17,800	\$11,500	\$248,200
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	\$112,400	\$78,700	\$59,600	\$20,400	\$12,200	\$283,300
<b>Lewisburg</b>	Greenbrier Valley	LWB	\$57,000	\$39,900	\$30,200	\$10,400	\$6,400	\$143,900
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	\$33,400	\$23,400	\$17,700	\$6,100	\$3,900	\$84,500
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	\$19,800	\$13,800	\$10,200	\$3,600	\$2,300	\$49,700
<b>Total</b>			<b>\$1,096,800</b>	<b>\$767,800</b>	<b>\$581,000</b>	<b>\$199,300</b>	<b>\$126,700</b>	<b>\$2,771,600</b>

Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Commercial Air Passenger Survey, 2020; and state and local tax rates

### 3.5.2.2 General Aviation Airports

**Table 19** presents tax revenue generated by out-of-state visitors arriving via GA at West Virginia's system airports. This includes revenue from sales and use taxes at the state and local level, as well as revenue generated from the state's rental car tax. These tax revenues were estimated using the same method described for the commercial service visitor spending tax revenue analysis.

**Table 19: State and Local Tax Revenue Generated from GA Visitor Spending by Tax Category**

Tax	Total
Sales and Use Tax (state)	\$1,165,900
Sales and Use Tax (local)	\$38,100
Rental Car Tax (state)	\$23,400
<b>Total</b>	<b>\$1,227,400</b>

*Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Transient GA Pilot & Passenger Survey 2020; and state and local tax rates*

**Table 20** presents revenues generated from state and local sales and use tax as well as rental car tax for each system airport. Note commercial service airports are listed in the table as they experience GA activity in addition to scheduled air service.

**Table 20: State and Local Tax Revenue Generated from GA Visitor Spending by Tax Category by Airport**

Associated City	Airport Name	FAA ID	Sales and Use Tax (state)	Sales and Use Tax (local)	Rental Car Tax (state)	Airport Total
<b>Commercial Service</b>						
<b>Beckley</b>	Raleigh County Memorial	BKW	\$31,000	\$0	\$700	\$31,700
<b>Charleston</b>	Yeager	CRW	\$73,600	\$0	\$1,800	\$75,400
<b>Clarksburg</b>	North Central West Virginia	CKB	\$30,800	\$0	\$700	\$31,500
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	\$2,700	\$0	\$100	\$2,800
<b>Lewisburg</b>	Greenbrier Valley	LWB	\$528,500	\$0	\$7,300	\$535,800
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	\$160,000	\$0	\$3,800	\$163,800
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	\$65,300	\$10,900	\$1,600	\$77,800
<b>General Aviation</b>						
<b>Bluefield</b>	Mercer County	BLF	\$89,300	\$14,900	\$2,900	\$107,100
<b>Buckhannon</b>	Upshur County Regional	W22	\$9,900	\$0	\$300	\$10,200
<b>Cumberland</b>	Greater Cumberland Regional	CBE	\$4,300	\$0	\$100	\$4,400
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN	\$12,500	\$0	\$300	\$12,800
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7	\$9,900	\$0	\$200	\$10,100
<b>Logan</b>	Logan County	6L4	\$2,300	\$0	\$100	\$2,400
<b>Martinsburg</b>	Eastern West Virginia Regional/Shepherd Field	MRB	\$40,700	\$0	\$1,000	\$41,700
<b>Moundsville</b>	Marshall County	MPG	\$3,700	\$600	\$100	\$4,400
<b>Petersburg</b>	Grant County	W99	\$27,800	\$0	\$700	\$28,500
<b>Philippi</b>	Philippi/Barbour County Regional	79D	\$600	\$0	\$0	\$600
<b>Pineville</b>	Kee Field	116	\$300	\$0	\$0	\$300
<b>Point Pleasant</b>	Mason County	312	\$300	\$0	\$0	\$300
<b>Ravenswood</b>	Jackson County	118	\$23,300	\$3,900	\$600	\$27,800
<b>Summersville</b>	Summersville	SXL	\$200	\$0	\$0	\$200
<b>Sutton</b>	Braxton County	481	\$1,500	\$0	\$0	\$1,500
<b>Wheeling</b>	Wheeling Ohio County	HLG	\$46,900	\$7,800	\$1,100	\$55,800
<b>Williamson</b>	Appalachian Regional	EBD	\$500	\$0	\$0	\$500
<b>Total</b>			<b>\$1,165,900</b>	<b>\$38,100</b>	<b>\$23,400</b>	<b>\$1,227,400</b>

Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Transient GA Pilot & Passenger, 2020; and state and local tax rates

**Table 21** presents out-of-state GA visitor spending tax revenues by visitor spending category. Spending at restaurants and for lodging generated the highest revenues between categories, with \$593,000 and \$383,800 generated respectively.

**Table 21: State and Local Tax Revenue Generated from Visitors by Spending Category for GA Airports**

Tax	Total
Restaurant	\$593,000
Lodging	\$383,800
Ground Transportation	\$147,300
Entertainment	\$84,600
Retail	\$18,700
<b>Total</b>	<b>\$1,227,400</b>

Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Transient GA Pilot & Passenger Survey, 2020; and state and local tax rates

### 3.5.2.3 Visitor Spending Summary

Approximately \$4 million in tax revenue is generated from out-of-state visitors arriving to the state via commercial service and GA operations and spending money in the local community. **Table 22** presents the summary of tax revenue generated from visitor spending across system airports for state and local tax revenue streams.

**Table 22: Summary of State and Local Tax Revenue from Visitor Spending**

Tax Source	Commercial	General Aviation	All Airports
State Tax Revenue	\$2,764,700	\$1,189,300	\$3,954,000
Local Tax Revenue	\$6,900	\$38,100	\$45,000
<b>Total</b>	<b>\$2,771,600</b>	<b>\$1,227,400</b>	<b>\$3,999,000</b>

Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; and state and local tax rates

### 3.5.3 Airport Tenants and Employees

Airport tenants and their employees generate tax revenue through the tenants' expenditures and through the employees spending their earned income. **Table 23** presents the tax revenue impacts generated from tenant expenditures and employee income and spending for all system airports. The majority of this revenue came from state sales and use tax, with \$45.8 million generated, and personal income tax, with \$20.6 million generated. State corporate income tax generated approximately \$3.3 million and local sales and use tax generated \$543,000. It is important to note that five system airports do not have any on-airport tenants and are therefore considered not applicable to the analyses in this section. For state and local sales tax impacts, tax rates were applied from **Table 16** to tenant expenditures and an estimate of employee spending.

Corporate income tax revenue was estimated by applying the corporate income tax rate in **Table 16** to tenants' proprietor income. Proprietor income was calculated using values from IMPLAN for each tenant's respective industry sector. For tenants for which a specific sector could not be identified, an average proprietor income-to-output ratio was applied. Personal income tax revenue was estimated by applying marginal tax rates to employee compensation.<sup>6</sup>

<sup>6</sup> See <https://www.creditkarma.com/tax/i/filing-west-virginia-state-tax>.



**Table 23: State and Local Tax Revenue Generated by Tenant Expenditures and Employee Income and Spending**

<b>Tax Source</b>	<b>Tenant Expenditures</b>	<b>Employee Income &amp; Spending</b>	<b>Total</b>
<b>Sales and Use Tax (state)</b>	\$38,253,300	\$7,540,000	\$45,793,300
<b>Sales and Use Tax (local)</b>	\$340,600	\$202,700	\$543,300
<b>Corporate Income Tax (state)</b>	\$3,275,200	NA	\$3,275,200
<b>Personal Income Tax (state)</b>	NA	\$20,556,200	\$20,556,200
<b>Total</b>	<b>\$41,869,000</b>	<b>\$28,299,000</b>	<b>\$70,168,000</b>

*Note: Totals may not sum exactly due to rounding. Sources: WV AEIS Airport Tenant Survey, 2020; and state and local tax rates*

**Table 24** presents the tax revenue generated from tenant expenditures for the 19 system airports with on-airport tenants. Tenant expenditures were estimated by subtracting what tenants provided in labor income from their revenues. Tax generated from tenant expenditures totaled approximately \$41.9 million, with commercial service airports generating \$39.5 million from tenant expenditures and GA airports generating \$2.4 million from tenant expenditures.

**Table 24: State and Local Tax Revenue Generated by Tenant Expenditures**

Associated City	Airport Name	FAA ID	Sales and Use Tax (state)	Sales and Use Tax (local)	Corporate Income Tax (state)	Airport Total
<b>Commercial Service</b>						
<b>Beckley</b>	Raleigh County Memorial	BKW	\$311,800	\$0	\$40,600	\$352,400
<b>Charleston</b>	Yeager	CRW	\$2,013,500	\$0	\$360,400	\$2,373,900
<b>Clarksburg</b>	North Central West Virginia	CKB	\$29,642,100	\$0	\$2,380,600	\$32,022,700
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	\$1,003,700	\$0	\$104,200	\$1,107,900
<b>Lewisburg</b>	Greenbrier Valley	LWB	\$808,800	\$0	\$56,100	\$864,900
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	\$701,300	\$0	\$65,300	\$766,600
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	\$1,664,800	\$277,500	\$55,800	\$1,998,100
<b>General Aviation</b>						
<b>Bluefield</b>	Mercer County	BLF	\$62,600	\$10,400	\$6,500	\$79,500
<b>Buckhannon</b>	Upshur County	W22	\$149,300	\$0	\$16,400	\$165,700
<b>Cumberland</b>	Greater Cumberland Regional	CBE	\$7,900	\$0	\$700	\$8,600
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN	\$242,900	\$0	\$37,100	\$280,000
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7	\$62,700	\$0	\$5,000	\$67,700
<b>Logan</b>	Logan County	6L4	\$85,700	\$0	\$8,500	\$94,200
<b>Martinsburg</b>	Eastern West Virginia Regional/Shepherd Field	MRB	\$1,177,700	\$0	\$102,700	\$1,280,400
<b>Moundsville</b>	Marshall County	MPG	\$110,700	\$18,500	\$10,500	\$139,700
<b>Petersburg</b>	Grant County	W99	\$100	\$0	\$0	\$100
<b>Philippi</b>	Philippi/Barbour County Regional	79D	\$2,300	\$0	\$900	\$3,200
<b>Ravenswood</b>	Jackson County	I16	\$115,400	\$19,200	\$13,100	\$147,700
<b>Wheeling</b>	Wheeling Ohio County	3I2	\$89,900	\$15,000	\$10,600	\$115,500
<b>Total</b>			<b>\$38,253,200</b>	<b>\$340,600</b>	<b>\$3,275,000</b>	<b>\$41,868,800</b>

Notes: Column totals do not precisely match tenant expenditure totals in Table 23 due to rounding for each individual airport. Totals may not sum exactly due to rounding.  
 Sources: WV AEIS Airport Tenant Survey, 2020; and state and local tax rates

**Table 25** presents the tax revenue generated from employee income and spending for the system airports with on-airport tenants. Employee spending was estimated by assuming that 36 percent of the average worker's spending is subject to sales and use tax. This is based on surveys by the U.S. Bureau of Labor Statistics.<sup>7</sup> Tax generated from employee income and spending totaled approximately \$28.3 million, with commercial service airports generating \$23.6 million from income and spending and GA airports generating \$4.7 million from income and spending.

<sup>7</sup> See <https://www.valuepenguin.com/average-household-budget>.

**Table 25: State and Local Tax Revenue Generated by Employee Income and Spending**

Associated City	Airport Name	FAA ID	Sales and Use Tax (state)	Sales and Use Tax (local)	Personal Income Tax (state)	Total
<b>Commercial Service</b>						
<b>Beckley</b>	Raleigh County Memorial	BKW	\$56,600	\$0	\$142,200	\$198,800
<b>Charleston</b>	Yeager	CRW	\$598,900	\$0	\$1,199,400	\$1,798,300
<b>Clarksburg</b>	North Central West Virginia	CKB	\$3,955,500	\$0	\$11,861,200	\$15,816,700
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	\$173,100	\$0	\$440,900	\$614,000
<b>Lewisburg</b>	Greenbrier Valley	LWB	\$55,700	\$0	\$133,700	\$189,400
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW	\$79,300	\$0	\$196,100	\$275,400
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	\$1,158,600	\$193,100	\$3,383,000	\$4,734,700
<b>General Aviation</b>						
<b>Bluefield</b>	Mercer County	BLF	\$10,800	\$1,800	\$21,600	\$34,200
<b>Buckhannon</b>	Upshur County	W22	\$27,300	\$0	\$77,400	\$104,700
<b>Cumberland</b>	Greater Cumberland Regional	CBE	\$1,200	\$0	\$1,700	\$2,900
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN	\$37,900	\$0	\$88,400	\$126,300
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7	\$8,300	\$0	\$24,100	\$32,400
<b>Logan</b>	Logan County	6L4	\$14,100	\$0	\$39,300	\$53,400
<b>Martinsburg</b>	Eastern West Virginia Regional/Shepherd Field	MRB	\$1,314,600	\$0	\$2,825,700	\$4,140,300
<b>Moundsville</b>	Marshall County	MPG	\$7,200	\$1,200	\$12,600	\$21,000
<b>Philippi</b>	Philippi/Barbour County Regional	79D	\$1,400	\$0	\$2,700	\$4,100
<b>Ravenswood</b>	Jackson County	I18	\$21,800	\$3,600	\$60,400	\$85,800
<b>Wheeling</b>	Wheeling Ohio County	HLG	\$17,600	\$2,900	\$45,700	\$66,200
<b>Total</b>			<b>\$7,539,900</b>	<b>\$202,600</b>	<b>\$20,556,100</b>	<b>\$28,298,600</b>

Notes: Column totals do not precisely match tenant expenditure totals in Table 23 due to rounding for each individual airport. Totals may not sum exactly due to rounding. Sources: WV AEIS Airport Manager Survey; WV AEIS Airport Tenant Survey, 2020; state and local tax rates

### 3.5.4 Aviation Fuel Tax

The WVAC provided data on aviation fuel tax transfers for calendar year (CY) 2019, shown in **Table 26**. These transfers indicate the amount of revenue WVAC was able to collect from the tax on aviation fuel sales. As shown, there are some variations in the funding generated from this tax throughout the year. The revenue from aviation fuel taxes reached a high point in August, with \$166,278. The total revenue generated from fuel tax in 2019 was approximately \$1.4 million, averaging approximately \$113,400 per month. These funds were expended to meet the state match for FAA Airport Improvement Program (AIP) grants used by airports to fund projects.

**Table 26: Aviation Fuel Tax Transfers in CY 2019**

Month	Aviation Fuel Tax
January	\$115,635
February	\$113,122
March	\$51,000
April	\$122,540
May	\$105,748
June	\$74,599
July	\$111,991
August	\$166,278
September	\$128,186
October	\$127,302
November	\$91,482
December	\$153,258
<b>Total</b>	<b>\$1,361,140</b>

*Note: Aviation fuel tax data is unavailable for individual airports. Source: WVAC*

### 3.5.5 Total Tax Revenue by Airport

**Table 27** summarizes the state, local, and total tax revenue across all sources for commercial and GA airports in West Virginia. Note, this table does not account for aviation fuel tax revenue, which is provided only on a statewide basis. As shown, West Virginia airports are responsible for generating over \$74 million in tax revenues, not including the \$1.4 million generated from aviation fuel tax. Activity at commercial service airports generated \$66.8 million in tax revenues and GA airports generated \$7.4 million. CKB generated the highest tax revenues of commercial service airports at \$48 million, and MRB generated the highest tax revenues of GA airports, at approximately \$5.5 million.

**Table 27: State, Local, and Total Tax Revenue by Airport**

Associated City	Airport Name	FAA ID	Sales and Use Tax (state)	Sales and Use Tax (local)	Rental Car Tax (state)	Corporate & Individual Income Tax (state)	Airport Total
<b>Commercial Service</b>							
<b>Beckley</b>	Raleigh County Memorial	BKW	\$448,500	\$0	\$2,500	\$182,800	\$633,900
<b>Charleston</b>	Yeager	CRW	\$4,530,600	\$0	\$68,200	\$1,559,800	\$6,158,600
<b>Clarksburg</b>	North Central West Virginia	CKB	\$33,868,000	\$0	\$9,300	\$14,241,800	\$48,119,100
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS	\$1,453,000	\$0	\$10,000	\$545,100	\$2,008,100
<b>Lewisburg</b>	Greenbrier Valley	LWB	\$1,531,900	\$0	\$12,300	\$189,800	\$1,734,100
<b>Morgantown</b>	Morgantown Municipal - Walter L Bill Hart Field	MGW	\$1,022,200	\$0	\$6,700	\$261,400	\$1,290,300
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB	\$2,930,000	\$488,400	\$3,100	\$3,438,800	\$6,860,100
<b>General Aviation</b>							
<b>Bluefield</b>	Mercer County	BLF	\$162,700	\$27,100	\$2,900	\$28,100	\$220,800
<b>Buckhannon</b>	Upshur County	W22	\$186,500	\$0	\$300	\$93,800	\$280,700
<b>Cumberland</b>	Greater Cumberland Regional	CBE	\$13,400	\$0	\$100	\$2,400	\$16,100
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN	\$293,300	\$0	\$300	\$125,500	\$419,100
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7	\$80,900	\$0	\$200	\$29,100	\$110,200
<b>Logan</b>	Logan County	6L4	\$102,100	\$0	\$100	\$47,800	\$150,000
<b>Martinsburg</b>	Eastern West Virginia Regional/ Shepherd Field	MRB	\$2,533,000	\$0	\$1,000	\$2,928,400	\$5,462,400
<b>Moundsville</b>	Marshall County	MPG	\$121,600	\$20,300	\$100	\$23,100	\$165,200
<b>Petersburg</b>	Grant County	W99	\$27,900	\$0	\$700	\$0	\$28,700
<b>Philippi</b>	Philippi/Barbour County Regional	79D	\$4,300	\$0	\$0	\$3,600	\$7,800
<b>Pineville</b>	Kee Field	I16	\$300	\$0	\$0	\$0	\$300

Associated City	Airport Name	FAA ID	Sales and Use Tax (state)	Sales and Use Tax (local)	Rental Car Tax (state)	Corporate & Individual Income Tax (state)	Airport Total
Point Pleasant	Mason County	3I2	\$300	\$0	\$0		\$300
Ravenswood	Jackson County	I18	\$160,500	\$26,700	\$600	\$73,500	\$261,300
Summersville	Summersville	SXL	\$200	\$0	\$0		\$200
Sutton	Braxton County	48I	\$1,500	\$0	\$0		\$1,500
Wheeling	Wheeling Ohio County	HLG	\$154,400	\$25,700	\$1,100	\$56,300	\$237,600
Williamson	Appalachian Regional	EBD	\$500	\$0	\$0		\$500
<b>Total</b>			<b>\$49,627,600</b>	<b>\$588,200</b>	<b>\$119,500</b>	<b>\$23,831,100</b>	<b>\$74,166,400</b>

Notes: Totals may not sum exactly due to rounding. Commercial service and GA totals do not sum to category totals in Tables 14-16. This is because commercial airports also have GA operations, and are therefore included in both categories when calculating revenue. This table does not include \$1.4 million in aviation fuel tax revenue because data is unavailable for individual airports. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; WVAC; and state and local tax rates

## 3.6 Airport-Reported COVID-19 Impacts

The WV AEIS was initiated in January 2020 and by February of the same year the COVID-19 pandemic was significantly impacting the world economy as it surged and spread across the globe. By March 2020, the U.S. economy was hit as the virus took a foothold across the country. The aviation industry and the nation's airports immediately felt the impacts as air travel nearly screeched to a halt. Fortunately, the study year for WV AEIS is 2019, and although the virus presented challenges to the project (schedule delay, site visit changes, etc.), the core assessment planned for the WV AEIS was allowed to continue. Now more than ever, the findings of the WV AEIS are critical to share with policy makers, planners, local and state authorities, and the general public.

Site visits were conducted at each of the 24 study airports in July 2020 to collect important on-airport data from airport owners/sponsors and tenants. While the data being collected during these site visits was for CY 2019, it was important to recognize and address how airports were impacted by COVID-19. In order to capture this data, airports were asked a series of COVID-19 related questions during their site visit. Responses to these questions covered topics such as revenue, staff, and on-airport activity or operational changes. While the pandemic did not affect the CY 2019 data for this study, the summary of COVID-19 impacts provided in this chapter should be considered alongside the quantitative findings of the study.

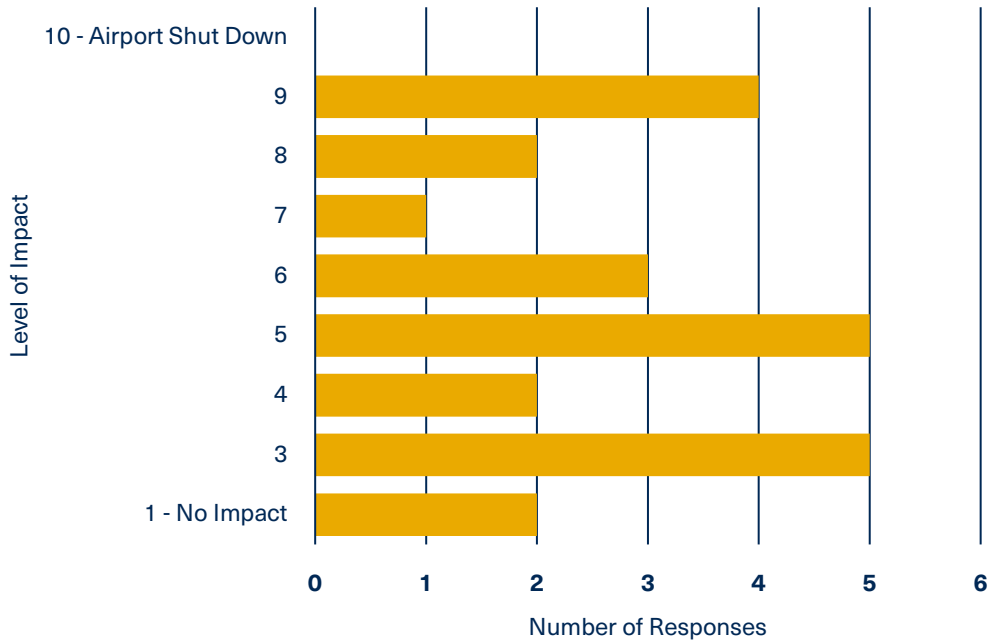
### 3.6.1 General Impacts

Study airports were asked to report on a scale of 1 to 10 (1 = no impact, 10 = shut down) the level of COVID-19 impacts at their airport. Airports were asked to consider financial, operational, and capital development impacts when selecting their level of impact. As presented in **Figure 5**, responses ranged from Level 1 to Level 9 (no airport selecting 10), with the most common responses of Level 3, Level 5, and Level 9. Six of the seven commercial service airports reported impacts of Level 5 or higher, and three of the four respondents who reported Level 9 were commercial service airports. These results indicate that the commercial service airports in West Virginia were more severely impacted by COVID-19 than GA airports. This is likely due in part to the significant and immediate drop in passenger levels flying commercially whereas GA airports had a more diverse customer base flying privately. Only two airports in the system reported no impacts (Level 1), one is a busier GA airport with 10,000 annual operations in 2019 and the other is a less busy rural airport that had approximately 300 annual operations in 2019.<sup>8</sup>

<sup>8</sup> Operations data sourced from the FAA Form 5010 Master Record



**Figure 5: Airport Reported Level of COVID-19 Impacts**



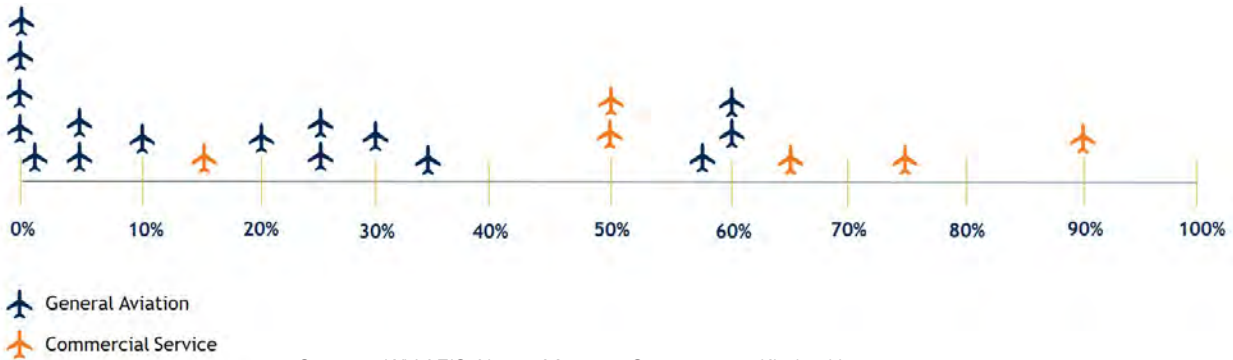
Sources: WV AEIS Airport Manager Survey, 2020; Kimley-Horn, 2021

### 3.6.2 Revenue Impacts

Airports were asked to report if they experienced a reduction in their revenue beginning in 2020. If they experienced revenue reductions, they were asked to provide an estimate of the percent decrease compared to 2019 revenues from the same time frame (January to July) and the approximate date the decline started.

Seventy-five percent of system airports reported they experienced some reduction in revenue due to COVID-19 impacts, while 17 percent of the system reported that they did not experience a revenue reduction. Eight percent of the system (one commercial service and one GA airport) did not provide a response to the percentage of revenue reduction they experienced. The percent of revenue reduction that airports experienced is quite varied and ranged from roughly one percent to 90 percent reduction, as presented in **Figure 6**.

**Figure 6: Range of Revenue Reduction as Reported by Airports**



Sources: WV AEIS Airport Manager Survey, 2020; Kimley-Horn, 2021

Six of the seven commercial service airports and 12 GA airports reported a percent reduction in their revenue. Eight airports reported a revenue loss of 50 percent or more compared to the same time in 2019. The average revenue reduction at system airports was 38 percent compared to revenue generated between January and July of 2019.

Airports were also asked when they noticed the revenue reductions started occurring. The two airports that did not provide a percentage of revenue reduction did provide a time frame for when their airports began experiencing impacts due to COVID-19 and are included in **Figure 7**. Their answers were included in the following analysis because they provided a qualitative response as to how their airport has experienced a decline in activity or operations that generate revenue.

**Figure 7** presents a six-month timeline between January 2020 and June 2020. As shown, the majority of the airports noticed initial revenue reductions or other decline in airport activity between early March and mid-April 2020.

**Figure 7: Timeline of when Impacts Started at West Virginia Airports**



Notes: Two airports are not represented in this figure because they did not report experiencing COVID-19 impacts.  
 Sources: WV AEIS Airport Manager Survey, 2020; Kimley-Horn, 2021

Airports were asked to provide additional details regarding the specific sectors that contributed the most to their revenue reduction or where they noticed the most significant changes in activity. For commercial service airports, the significant reduction in scheduled airline service resulted in the loss of parking fees, landing fees, concessions revenues, other user fees, and fuel sales, contributing the most to their revenue loss. In general, most GA airports also noted a loss of fuel sales for both 100LL and Jet A. Some outlying GA airports indicated that fuel sales had actually increased, perhaps because users were opting to visit the less busy airport over other busier facilities. Another GA airport noted that the number of gallons sold had increased but the low

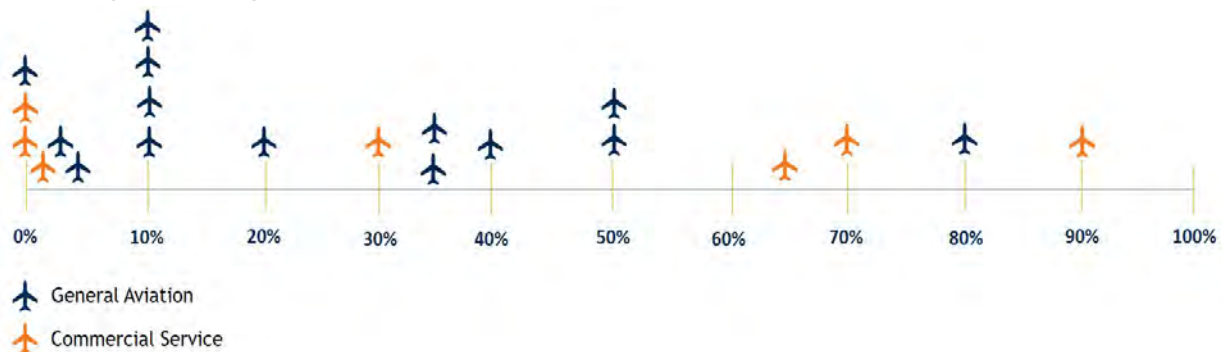
cost of fuel resulted in a loss of revenue. GA airports noted that the inability to host community events, such as fly-ins, impacted their airport revenues because those are great opportunities to attract airport visitors who pay for aircraft parking, fuel, or who visit on-airport restaurants and other businesses. Other activities that GA airports observed declining included flight instruction, business aviation, recreational flying, and air charter services, all which hindered the airports' ability to generate revenue.

### 3.6.3 Impacts to Operations

Airports were also asked to provide estimates for the percent change in aircraft operations they experienced due to impacts of COVID-19. Commercial service airport responses to this question were quite varied. One airport noted no operational decreases occurred due to their Essential Air Service (EAS) status. The two other airports in the state that offer scheduled airline service through the EAS program noted that their operations have stayed relatively the same, however the number of enplanements declined drastically, with an airport noting an 80 percent decline in commercial service passengers. Other commercial service airports that do not operate under EAS status reported that they experienced a 65 percent to 76 percent decrease in scheduled airline service operations. Commercial service airports also reported some significant decreases in their GA operations, with one airport noting a 90 percent decrease in GA operations, and others offering a range of two to 70 percent reductions. Two commercial service airports noted no GA operational reductions, and another experienced an increase in GA traffic due to an increase in private jet operations.

GA airports experienced a wide range of operational declines, from no decline to 80 percent decline. Three GA airports did not respond to this question on the survey, so data is only available for 14 GA airports. One GA airport reported no change and noted that GA activity may have actually increased. Six GA airports reported a three to 10 percent decline in operations and four other GA airports reported a 20 to 40 percent decline in operations. Three GA airports reported a 50 percent or greater decline in operations, with the highest decline being 80 percent. **Figure 8** shows the range of GA operational declines noted by both commercial service and GA airports.

**Figure 8: Range of Decline in GA Operations for Commercial Service and GA Airports**



Sources: WV AEIS Airport Manager Survey, 2020; Kimley-Horn, 2021

### 3.6.4 Financial Changes

The following sections provide information about some of the financial concerns airport managers reported experiencing due to COVID-19, including concerns related to state level funding, tenants' ability to pay lease payments in a timely manner, and fluctuating on-airport employment levels.

#### 3.6.4.1 State Grant Program

Airports were asked to provide information about how their airport budget may be impacted by reductions in the state grant program. Only eight of the 24 airports reported that their airport budget would not be impacted if there are reductions in the state grant program. Two airports responded that they were not yet sure how reductions in the state grant program would impact their airport budget. The remaining 14 system airports reported concerns for some type of impact to their airport budget due to the reduction in available state funding. Airports are predominately concerned that important projects will be delayed because they do not have the state or local funding match to accept Federal Aviation Administration (FAA) grants. Some airports reported that funding from the state program factors into their operational budget so a reduction in that funding could impact daily operations in addition to capital project scheduling.

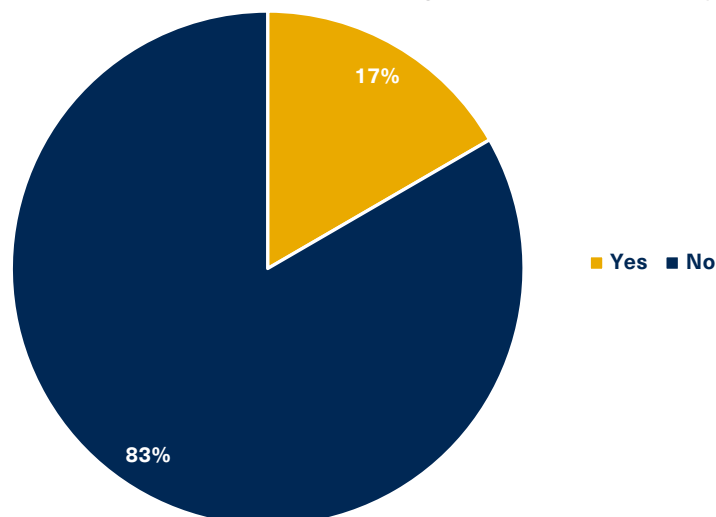
#### 3.6.4.2 Rent Abatement or Deferrals

When on-airport activity came to a grinding halt it not only impacted airports' ability to generate revenue, but it greatly impacted the on-airport business tenants' ability to generate revenue as well. Both aeronautical and non-aeronautical tenants felt the impacts of COVID-19 as they were not isolated to the aviation industry. Five system airports provided rent abatement or deferral programs to support their tenants through this difficult period. One airport was able to provide all of their tenants with rent abatements, while other airports provided between 10 and 30 percent of their tenants with rent abatements.

#### 3.6.4.3 Airport Employment

During the time of the survey, the majority of airports reported that they did not experience any changes to on-airport employment. As shown in **Figure 9**, only 17 percent (four airports) reported that they had to terminate one or more airport employees.

**Figure 9: Percent of Airports that Experienced a Change in On-Airport Employment**



Sources: WV AEIS Airport Manager Survey, 2020; Kimley-Horn, 2021

While 17 percent of the airports reported a change in on-airport employment due to COVID-19, they all reported that these changes would be temporary. The most notable decrease was for a commercial service airport that reported a 10 percent loss in administration or operations jobs and a 33 percent loss in tenant employment, including their FBO, rental car kiosks, and concessionaires. None of the airports reported a decrease in employment for support service jobs, such as Transportation Security Administration (TSA), military contractors, and emergency services.

Airports were also asked to comment as to whether they experienced a notable change in itinerant activity at their airport. The majority of airports did not report any noticeable itinerant activity changes, while eight airports noted some itinerant activity change. Two airports noted the decline in itinerant activity was very substantial and the other six noticed a moderate to light change. Airports cited the loss of community airport events and the decline in business aviation as the reason for their decline in itinerant activity.

### **3.6.5 Summary of COVID-19 Impacts**

The full extent of the impacts of COVID-19 on West Virginia airports is not yet known. So far, the impacts have been varied with some airports being more affected than others. The COVID-19 questions on the WV AEIS Airport Manager Survey were designed to capture a high-level understanding of what airports experienced in the early months of the COVID-19 outbreak. The findings show that almost all airports experienced some form of operational, employment, activity, and/or revenue changes due to the pandemic. Commercial service airports experienced a significant decline in passengers and enplanements, resulting in loss of revenue from a variety of sources, including parking, fuel, and other user fees. GA airports missed out on opportunities to host community events that generate revenue and experienced significant decrease in itinerant operations, resulting in a loss of revenue from fuel sales, aircraft parking fees, and other user fees. Some GA airports did note that recreational flying activities increased at their airport. They cited people having more time to recreate because of work-from-home mandates, early retirements, or other changes in employment due to significant economic changes as the reason for their activity increase.

## **3.7 Summary**

The economic impact findings presented in this chapter look at direct and multiplier impacts (supplier sales and income re-spending) from on-airport activity, visitor spending, and air cargo activity related to West Virginia airports. Findings are presented at the statewide, regional, and airport level to better represent the diverse range of activities and impacts that occur across the state. In total, airports in West Virginia contribute over \$1.6 billion to the state's economy and support over 10,700 jobs with a payroll of \$550 million. This activity generates over \$75 million in state and local tax revenues annually. While the COVID-19 pandemic impacted each of the 24 study airports in some way, the aviation industry in the state is strong and has begun a slow recovery to 2019 activity levels. While the timeline is not yet known, the diversity of business and recreation opportunities in the state will only help West Virginia's aviation industry recovery.

## APPENDIX A. DATA TABLES

### A.1 Introduction

Information presented in this appendix includes expanded economic impact findings by airport and by tourism region, as well as additional details on the impacts of supplier sales and income re-spending on in-state industries. These tables supplement the findings included in **Chapter 3. Economic Impact Findings**. Note that the totals presented in this appendix do not account for impacts of air cargo, as those are calculated on a statewide basis and are not presentable by airport.

### A.2 Individual Airport Impacts

The following tables, **Table 1** through **Table 24**, provide a breakdown of airport level impacts between direct impacts and multiplier impacts (supplier sales and income re-spending). The tables are presented in alphabetical order by airport name. See **Chapter 3. Economic Impact Findings** for more information on the airport level impacts.

**Table 1: Appalachian Regional Airport (EBD)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	1	\$10,000	\$11,000	\$84,000
Visitor Spending	-	\$3,000	\$4,000	\$9,000
<b>Total Direct Impacts</b>	<b>1</b>	<b>\$12,000</b>	<b>\$15,000</b>	<b>\$93,000</b>
Supplier Sales	-	\$14,000	\$20,000	\$40,000
Income Re-spending	-	\$11,000	\$16,000	\$35,000
<b>Total Multiplier Impacts</b>	<b>-</b>	<b>\$25,000</b>	<b>\$36,000</b>	<b>\$75,000</b>
<b>Total</b>	<b>2</b>	<b>\$37,000</b>	<b>\$52,000</b>	<b>\$168,000</b>

*Notes: Totals may not sum due to rounding. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

**Table 2: Braxton County Airport (48I)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	3	\$19,000	\$24,000	\$118,000
Visitor Spending	-	\$8,000	\$12,000	\$26,000
<b>Total Direct Impacts</b>	<b>3</b>	<b>\$27,000</b>	<b>\$36,000</b>	<b>\$144,000</b>
Supplier Sales	-	\$18,000	\$27,000	\$57,000
Income Re-spending	-	\$16,000	\$24,000	\$52,000
<b>Total Multiplier Impacts</b>	<b>-</b>	<b>\$34,000</b>	<b>\$51,000</b>	<b>\$109,000</b>
<b>Total</b>	<b>4</b>	<b>\$61,000</b>	<b>\$87,000</b>	<b>\$253,000</b>

*Notes: Totals may not sum due to rounding. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021*

**Table 3: Upshur County Regional Airport (W22)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	25	\$1,887,000	\$2,512,000	\$5,024,000
Visitor Spending	2	\$52,000	\$83,000	\$173,000
<b>Total Direct Impacts</b>	<b>27</b>	<b>\$1,939,000</b>	<b>\$2,595,000</b>	<b>\$5,198,000</b>
Supplier Sales	8	\$383,000	\$628,000	\$1,305,000
Income Re-spending	12	\$459,000	\$686,000	\$1,509,000
<b>Total Multiplier Impacts</b>	<b>20</b>	<b>\$842,000</b>	<b>\$1,314,000</b>	<b>\$2,815,000</b>
<b>Total</b>	<b>48</b>	<b>\$2,781,000</b>	<b>\$3,908,000</b>	<b>\$8,012,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 4: Eastern West Virginia Regional/Shepherd Field (MRB)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	1,688	\$72,125,000	\$82,345,000	\$94,495,000
Visitor Spending	9	\$236,000	\$378,000	\$706,000
<b>Total Direct Impacts</b>	<b>1,697</b>	<b>\$72,362,000</b>	<b>\$82,723,000</b>	<b>\$95,201,000</b>
Supplier Sales	53	\$2,432,000	\$3,877,000	\$7,982,000
Income Re-spending	392	\$15,830,000	\$23,611,000	\$50,626,000
<b>Total Multiplier Impacts</b>	<b>445</b>	<b>\$18,262,000</b>	<b>\$27,488,000</b>	<b>\$58,608,000</b>
<b>Total</b>	<b>2,142</b>	<b>\$90,623,000</b>	<b>\$110,211,000</b>	<b>\$153,809,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 5: Elkins-Randolph County - Jennings Randolph Field (EKN)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	76	\$3,819,000	\$5,515,000	\$8,837,000
Visitor Spending	3	\$66,000	\$108,000	\$217,000
<b>Total Direct Impacts</b>	<b>79</b>	<b>\$3,884,000</b>	<b>\$5,623,000</b>	<b>\$9,054,000</b>
Supplier Sales	17	\$667,000	\$1,057,000	\$2,293,000
Income Re-spending	27	\$1,010,000	\$1,513,000	\$3,361,000
<b>Total Multiplier Impacts</b>	<b>44</b>	<b>\$1,676,000</b>	<b>\$2,570,000</b>	<b>\$5,654,000</b>
<b>Total</b>	<b>122</b>	<b>\$5,561,000</b>	<b>\$8,192,000</b>	<b>\$14,709,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 6: Fairmount Municipal - Frankman Field (4G7)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	7	\$285,000	\$520,000	\$1,635,000
Visitor Spending	2	\$55,000	\$89,000	\$172,000
<b>Total Direct Impacts</b>	<b>9</b>	<b>\$341,000</b>	<b>\$609,000</b>	<b>\$1,807,000</b>
Supplier Sales	2	\$93,000	\$142,000	\$280,000
Income Re-spending	3	\$115,000	\$173,000	\$360,000
<b>Total Multiplier Impacts</b>	<b>5</b>	<b>\$209,000</b>	<b>\$315,000</b>	<b>\$640,000</b>
<b>Total</b>	<b>13</b>	<b>\$549,000</b>	<b>\$924,000</b>	<b>\$2,447,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 7: Grant County Airport (W99)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	6	\$120,000	\$170,000	\$429,000
Visitor Spending	7	\$146,000	\$240,000	\$483,000
<b>Total Direct Impacts</b>	<b>13</b>	<b>\$267,000</b>	<b>\$410,000</b>	<b>\$912,000</b>
Supplier Sales	2	\$81,000	\$126,000	\$264,000
Income Re-spending	2	\$87,000	\$131,000	\$290,000
<b>Total Multiplier Impacts</b>	<b>4</b>	<b>\$168,000</b>	<b>\$257,000</b>	<b>\$554,000</b>
<b>Total</b>	<b>17</b>	<b>\$435,000</b>	<b>\$667,000</b>	<b>\$1,466,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 8: Greater Cumberland Regional Airport (CBE)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	56	\$1,981,000	\$2,844,000	\$5,615,000
Visitor Spending	1	\$22,000	\$35,000	\$75,000
<b>Total Direct Impacts</b>	<b>57</b>	<b>\$2,003,000</b>	<b>\$2,880,000</b>	<b>\$5,690,000</b>
Supplier Sales	8	\$383,000	\$643,000	\$1,344,000
Income Re-spending	16	\$592,000	\$886,000	\$1,962,000
<b>Total Multiplier Impacts</b>	<b>24</b>	<b>\$975,000</b>	<b>\$1,530,000</b>	<b>\$3,306,000</b>
<b>Total</b>	<b>81</b>	<b>\$2,978,000</b>	<b>\$4,409,000</b>	<b>\$8,996,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021



**Table 9: Greenbrier Valley Airport (LWB)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	100	\$5,720,000	\$11,319,000	\$20,384,000
Visitor Spending	136	\$3,795,000	\$6,400,000	\$11,779,000
<b>Total Direct Impacts</b>	<b>236</b>	<b>\$9,515,000</b>	<b>\$17,719,000</b>	<b>\$32,163,000</b>
Supplier Sales	64	\$3,095,000	\$4,983,000	\$9,858,000
Income Re-spending	66	\$2,650,000	\$3,951,000	\$8,484,000
<b>Total Multiplier Impacts</b>	<b>130</b>	<b>\$5,744,000</b>	<b>\$8,934,000</b>	<b>\$18,342,000</b>
<b>Total</b>	<b>365</b>	<b>\$15,260,000</b>	<b>\$26,652,000</b>	<b>\$50,505,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 10: Jackson County Airport (I18)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	26	\$1,839,000	\$2,197,000	\$4,207,000
Visitor Spending	5	\$122,000	\$202,000	\$404,000
<b>Total Direct Impacts</b>	<b>31</b>	<b>\$1,961,000</b>	<b>\$2,399,000</b>	<b>\$4,612,000</b>
Supplier Sales	8	\$390,000	\$645,000	\$1,289,000
Income Re-spending	14	\$545,000	\$814,000	\$1,757,000
<b>Total Multiplier Impacts</b>	<b>22</b>	<b>\$935,000</b>	<b>\$1,459,000</b>	<b>\$3,046,000</b>
<b>Total</b>	<b>53</b>	<b>\$2,896,000</b>	<b>\$3,857,000</b>	<b>\$7,658,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 11: Kee Field (I16)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	1	\$43,000	\$53,000	\$75,000
Visitor Spending	-	\$2,000	\$3,000	\$5,000
<b>Total Direct Impacts</b>	<b>1</b>	<b>\$44,000</b>	<b>\$55,000</b>	<b>\$80,000</b>
Supplier Sales	-	\$11,000	\$16,000	\$31,000
Income Re-spending	-	\$9,000	\$14,000	\$29,000
<b>Total Multiplier Impacts</b>	<b>-</b>	<b>\$20,000</b>	<b>\$29,000</b>	<b>\$60,000</b>
<b>Total</b>	<b>2</b>	<b>\$64,000</b>	<b>\$85,000</b>	<b>\$141,000</b>

Notes: Totals may not sum due to rounding. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 12: Logan County Airport (6L4)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	20	\$851,000	\$1,240,000	\$2,397,000
Visitor Spending	1	\$12,000	\$19,000	\$41,000
<b>Total Direct Impacts</b>	<b>21</b>	<b>\$863,000</b>	<b>\$1,260,000</b>	<b>\$2,438,000</b>
Supplier Sales	4	\$173,000	\$289,000	\$582,000
Income Re-spending	5	\$194,000	\$290,000	\$630,000
<b>Total Multiplier Impacts</b>	<b>9</b>	<b>\$368,000</b>	<b>\$579,000</b>	<b>\$1,212,000</b>
<b>Total</b>	<b>29</b>	<b>\$1,231,000</b>	<b>\$1,839,000</b>	<b>\$3,650,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 13: Marshall County Airport (MPG)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	29	\$2,269,000	\$2,697,000	\$4,531,000
Visitor Spending	1	\$21,000	\$32,000	\$65,000
<b>Total Direct Impacts</b>	<b>30</b>	<b>\$2,290,000</b>	<b>\$2,729,000</b>	<b>\$4,595,000</b>
Supplier Sales	7	\$412,000	\$650,000	\$1,259,000
Income Re-spending	14	\$577,000	\$847,000	\$1,791,000
<b>Total Multiplier Impacts</b>	<b>21</b>	<b>\$988,000</b>	<b>\$1,497,000</b>	<b>\$3,049,000</b>
<b>Total</b>	<b>51</b>	<b>\$3,279,000</b>	<b>\$4,226,000</b>	<b>\$7,645,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 14: Mason County Airport (3I2)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	4	\$191,000	\$288,000	\$451,000
Visitor Spending	-	\$2,000	\$2,000	\$5,000
<b>Total Direct Impacts</b>	<b>4</b>	<b>\$192,000</b>	<b>\$291,000</b>	<b>\$456,000</b>
Supplier Sales	1	\$31,000	\$53,000	\$101,000
Income Re-spending	1	\$51,000	\$76,000	\$154,000
<b>Total Multiplier Impacts</b>	<b>2</b>	<b>\$82,000</b>	<b>\$129,000</b>	<b>\$255,000</b>
<b>Total</b>	<b>6</b>	<b>\$274,000</b>	<b>\$420,000</b>	<b>\$711,000</b>

Notes: Totals may not sum due to rounding. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 15: Mercer County Airport (BLF)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	29	\$1,047,000	\$1,562,000	\$2,731,000
Visitor Spending	21	\$483,000	\$763,000	\$1,563,000
<b>Total Direct Impacts</b>	<b>50</b>	<b>\$1,530,000</b>	<b>\$2,325,000</b>	<b>\$4,294,000</b>
Supplier Sales	7	\$334,000	\$541,000	\$1,088,000
Income Re-spending	17	\$681,000	\$1,015,000	\$2,182,000
<b>Total Multiplier Impacts</b>	<b>24</b>	<b>\$1,015,000</b>	<b>\$1,556,000</b>	<b>\$3,270,000</b>
<b>Total</b>	<b>74</b>	<b>\$2,545,000</b>	<b>\$3,881,000</b>	<b>\$7,564,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 16: Mid-Ohio Valley Regional Airport (PKB)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	580	\$61,448,000	\$73,128,000	\$92,139,000
Visitor Spending	24	\$554,000	\$934,000	\$1,889,000
<b>Total Direct Impacts</b>	<b>604</b>	<b>\$62,001,000</b>	<b>\$74,062,000</b>	<b>\$94,028,000</b>
Supplier Sales	96	\$4,580,000	\$7,471,000	\$15,300,000
Income Re-spending	350	\$13,819,000	\$20,659,000	\$44,635,000
<b>Total Multiplier Impacts</b>	<b>446</b>	<b>\$18,399,000</b>	<b>\$28,130,000</b>	<b>\$59,935,000</b>
<b>Total</b>	<b>1,050</b>	<b>\$80,400,000</b>	<b>\$102,191,000</b>	<b>\$153,963,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 17: Morgantown Municipal - Walter L. Bill Hart Field (MGW)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	130	\$6,804,000	\$10,265,000	\$21,662,000
Visitor Spending	54	\$1,345,000	\$2,183,000	\$4,268,000
<b>Total Direct Impacts</b>	<b>184</b>	<b>\$8,149,000</b>	<b>\$12,448,000</b>	<b>\$25,931,000</b>
Supplier Sales	50	\$2,519,000	\$4,016,000	\$7,991,000
Income Re-spending	59	\$2,516,000	\$3,762,000	\$7,860,000
<b>Total Multiplier Impacts</b>	<b>109</b>	<b>\$5,035,000</b>	<b>\$7,778,000</b>	<b>\$15,851,000</b>
<b>Total</b>	<b>293</b>	<b>\$13,184,000</b>	<b>\$20,226,000</b>	<b>\$41,782,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 18: North Central West Virginia Airport (CKB)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	1,267	\$118,077,000	\$220,049,000	\$621,192,000
Visitor Spending	58	\$1,489,000	\$2,468,000	\$4,917,000
<b>Total Direct Impacts</b>	<b>1,325</b>	<b>\$119,566,000</b>	<b>\$222,517,000</b>	<b>\$626,109,000</b>
Supplier Sales	308	\$18,292,000	\$27,809,000	\$54,595,000
Income Re-spending	712	\$30,320,000	\$45,378,000	\$94,744,000
<b>Total Multiplier Impacts</b>	<b>1,020</b>	<b>\$48,612,000</b>	<b>\$73,188,000</b>	<b>\$149,338,000</b>
<b>Total</b>	<b>2,345</b>	<b>\$168,177,000</b>	<b>\$295,704,000</b>	<b>\$775,448,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 19: Philippi/Barbour County Regional Airport (79D)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	6	\$270,000	\$329,000	\$432,000
Visitor Spending	-	\$3,000	\$5,000	\$10,000
<b>Total Direct Impacts</b>	<b>6</b>	<b>\$273,000</b>	<b>\$334,000</b>	<b>\$442,000</b>
Supplier Sales	1	\$28,000	\$49,000	\$96,000
Income Re-spending	3	\$106,000	\$159,000	\$338,000
<b>Total Multiplier Impacts</b>	<b>4</b>	<b>\$134,000</b>	<b>\$208,000</b>	<b>\$434,000</b>
<b>Total</b>	<b>9</b>	<b>\$408,000</b>	<b>\$542,000</b>	<b>\$876,000</b>

Notes: Totals may not sum due to rounding. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 20: Raleigh County Memorial Airport (BKW)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	74	\$3,774,000	\$5,215,000	\$9,599,000
Visitor Spending	16	\$449,000	\$752,000	\$1,437,000
<b>Total Direct Impacts</b>	<b>90</b>	<b>\$4,224,000</b>	<b>\$5,966,000</b>	<b>\$11,036,000</b>
Supplier Sales	21	\$1,075,000	\$1,666,000	\$3,305,000
Income Re-spending	29	\$1,153,000	\$1,720,000	\$3,692,000
<b>Total Multiplier Impacts</b>	<b>50</b>	<b>\$2,228,000</b>	<b>\$3,386,000</b>	<b>\$6,997,000</b>
<b>Total</b>	<b>141</b>	<b>\$6,452,000</b>	<b>\$9,352,000</b>	<b>\$18,033,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 21: Summersville Airport (SXL)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	-	\$0	\$8,000	\$20,000
Visitor Spending	-	\$1,000	\$2,000	\$4,000
<b>Total Direct Impacts</b>	<b>-</b>	<b>\$1,000</b>	<b>\$10,000</b>	<b>\$24,000</b>
Supplier Sales	-	\$3,000	\$5,000	\$10,000
Income Re-spending	-	\$3,000	\$4,000	\$9,000
<b>Total Multiplier Impacts</b>	<b>-</b>	<b>\$6,000</b>	<b>\$9,000</b>	<b>\$19,000</b>
<b>Total</b>	<b>-</b>	<b>\$7,000</b>	<b>\$19,000</b>	<b>\$43,000</b>

Notes: Totals may not sum due to rounding. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 22: Tri-State/Milton J. Ferguson Field (HTS)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	260	\$13,188,000	\$19,422,000	\$35,142,000
Visitor Spending	55	\$1,593,000	\$2,584,000	\$5,068,000
<b>Total Direct Impacts</b>	<b>315</b>	<b>\$14,781,000</b>	<b>\$22,006,000</b>	<b>\$40,210,000</b>
Supplier Sales	65	\$3,280,000	\$5,148,000	\$10,202,000
Income Re-spending	90	\$3,553,000	\$5,304,000	\$11,516,000
<b>Total Multiplier Impacts</b>	<b>155</b>	<b>\$6,833,000</b>	<b>\$10,453,000</b>	<b>\$21,717,000</b>
<b>Total</b>	<b>471</b>	<b>\$21,614,000</b>	<b>\$32,459,000</b>	<b>\$61,927,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 23: Wheeling Ohio County Airport (HLG)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	42	\$1,609,000	\$2,186,000	\$4,270,000
Visitor Spending	10	\$267,000	\$428,000	\$814,000
<b>Total Direct Impacts</b>	<b>52</b>	<b>\$1,876,000</b>	<b>\$2,613,000</b>	<b>\$5,084,000</b>
Supplier Sales	8	\$447,000	\$700,000	\$1,349,000
Income Re-spending	14	\$591,000	\$869,000	\$1,841,000
<b>Total Multiplier Impacts</b>	<b>22</b>	<b>\$1,038,000</b>	<b>\$1,569,000</b>	<b>\$3,189,000</b>
<b>Total</b>	<b>74</b>	<b>\$2,914,000</b>	<b>\$4,183,000</b>	<b>\$8,273,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 24: Yeager Airport (CRW)**

Source	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	1,982	\$67,535,000	\$86,395,000	\$107,062,000
Visitor Spending	381	\$10,826,000	\$18,170,000	\$35,033,000
<b>Total Direct Impacts</b>	<b>2,363</b>	<b>\$78,361,000</b>	<b>\$104,565,000</b>	<b>\$142,095,000</b>
Supplier Sales	158	\$8,714,000	\$13,728,000	\$25,518,000
Income Re-spending	418	\$19,075,000	\$28,578,000	\$57,692,000
<b>Total Multiplier Impacts</b>	<b>576</b>	<b>\$27,789,000</b>	<b>\$42,306,000</b>	<b>\$83,211,000</b>
<b>Total</b>	<b>2,940</b>	<b>\$106,150,000</b>	<b>\$146,871,000</b>	<b>\$225,306,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

### A.3 Regional Impacts

The following tables, **Table 26** through **Table 34**, provide a breakdown of regional level impacts between direct impacts and multiplier impacts (supplier sales and income re-spending). The tables are presented in alphabetical order by region. See **Chapter 3. Economic Impact Findings** for more information on the regional level impacts. For reference, **Table 25** shows the regions in alphabetical order and the airports included within each region.

**Table 25: Airports by Region**

Tourism Region	Airport Name	FAA ID
<b>Eastern Panhandle</b>	Eastern West Virginia Regional/Shepherd Field	MRB
<b>Hatfield McCoy Mountains</b>	Tri-State/Milton J. Ferguson Field	HTS
	Appalachian Regional	EBD
	Logan County	6L4
<b>Metro Valley</b>	Mason County	3I2
	Yeager	CRW
<b>Mid-Ohio Valley</b>	Mid-Ohio Valley Regional	PKB
	Jackson County	I18
<b>Mountain Lakes</b>	Upshur County Regional	W22
	Summersville	SXL
	Braxton County	48I
<b>Mountaineer Country</b>	North Central West Virginia	CKB
	Fairmont Municipal - Frankman Field	4G7
	Morgantown Municipal - Walter L. Bill Hart Field	MGW
	Philippi/Barbour County Regional	79D

Tourism Region	Airport Name	FAA ID
New River-Greenbrier Valley	Mercer County	BLF
	Raleigh County Memorial	BKW
	Kee Field	I16
	Greenbrier Valley	LWB
Northern Panhandle	Wheeling Ohio County	HLG
	Marshall County	MPG
Potomac Highlands	Elkins-Randolph County - Jennings Randolph Field	EKN
	Grant County	W99
	Greater Cumberland Regional	CBE

Sources: West Virginia Tourism Office, 2020; Kimley-Horn, 2020

**Table 26: Eastern Panhandle**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	1,698	\$72,362,000	\$82,723,000	\$95,201,000
Supplier Sales	69	\$3,026,000	\$4,798,000	\$9,583,000
Income Re-spending	325	\$12,198,000	\$18,597,000	\$41,238,000
<b>Total</b>	<b>2,092</b>	<b>\$87,586,000</b>	<b>\$106,119,000</b>	<b>\$146,022,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 27: Hatfield McCoy Mountains**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	337	\$15,657,000	\$23,281,000	\$42,741,000
Supplier Sales	69	\$3,484,000	\$5,344,000	\$10,384,000
Income Re-spending	97	\$3,642,000	\$5,378,000	\$12,193,000
<b>Total</b>	<b>503</b>	<b>\$22,783,000</b>	<b>\$34,003,000</b>	<b>\$65,317,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 28: Metro Valley**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	2,367	\$78,553,000	\$104,856,000	\$142,551,000
Supplier Sales	179	\$10,151,000	\$15,769,000	\$28,691,000
Income Re-spending	449	\$21,722,000	\$32,532,000	\$63,908,000
<b>Total</b>	<b>2,996</b>	<b>\$110,426,000</b>	<b>\$153,156,000</b>	<b>\$235,150,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 29: Mid-Ohio Valley**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	635	\$63,963,000	\$76,460,000	\$98,640,000
Supplier Sales	104	\$4,800,000	\$8,003,000	\$17,343,000
Income Re-spending	324	\$12,160,000	\$18,462,000	\$41,125,000
<b>Total</b>	<b>1,063</b>	<b>\$80,922,000</b>	<b>\$102,926,000</b>	<b>\$157,108,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 30: Mountain Lakes**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	31	\$1,967,000	\$2,641,000	\$5,366,000
Supplier Sales	31	\$1,299,000	\$2,137,000	\$4,499,000
Income Re-spending	66	\$2,425,000	\$3,605,000	\$7,964,000
<b>Total</b>	<b>128</b>	<b>\$5,691,000</b>	<b>\$8,383,000</b>	<b>\$17,828,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 31: Mountaineer Country**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	1,525	\$128,329,000	\$235,908,000	\$654,289,000
Supplier Sales	336	\$19,888,000	\$30,399,000	\$58,596,000
Income Re-spending	757	\$32,777,000	\$48,394,000	\$99,484,000
<b>Total</b>	<b>2,618</b>	<b>\$180,994,000</b>	<b>\$314,700,000</b>	<b>\$812,369,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 32: New River - Greenbrier Valley**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	378	\$15,313,000	\$26,065,000	\$47,574,000
Supplier Sales	18	\$810,000	\$1,331,000	\$2,791,000
Income Re-spending	53	\$2,198,000	\$3,258,000	\$6,673,000
<b>Total</b>	<b>450</b>	<b>\$18,321,000</b>	<b>\$30,654,000</b>	<b>\$57,038,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

**Table 33: Northern Panhandle**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	82	\$4,166,000	\$5,342,000	\$9,680,000
Supplier Sales	36	\$2,116,000	\$3,503,000	\$7,621,000
Income Re-spending	83	\$3,866,000	\$5,800,000	\$12,310,000
<b>Total</b>	<b>202</b>	<b>\$10,148,000</b>	<b>\$14,645,000</b>	<b>\$29,610,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021



**Table 34: Potomac Highlands**

Source	Jobs	Payroll	Value Added	Business Revenues
Direct	149	\$6,154,000	\$8,912,000	\$15,657,000
Supplier Sales	45	\$1,882,000	\$3,005,000	\$6,629,000
Income Re-spending	88	\$2,973,000	\$4,455,000	\$10,656,000
<b>Total</b>	<b>282</b>	<b>\$11,010,000</b>	<b>\$16,372,000</b>	<b>\$32,942,000</b>

Note: Totals may not sum due to rounding. Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

## A.4 Expanded Supplier Sales Impacts by Industry

**Chapter 3. Economic Impact Findings** presents the top ten industries with the highest number of jobs and business revenues generated from supplier sales impacts of aviation-related activities. **Table 35** includes all in-state industries with jobs and business revenues generated from supplier sales impacts of aviation-related activities. Industries are listed in descending order of business revenues.

**Table 35: Expanded Supplier Sales Impacts by Industry**

Industry	Jobs	Business Revenues
Wholesale Trade	63	\$16,254,000
Administrative & Support Services	181	\$13,712,000
Transportation Support Services	85	\$13,483,000
Professional, Scientific, & Tech Services	90	\$11,638,000
Real Estate	50	\$9,361,000
Transportation Equipment Manufacturing	15	\$8,852,000
Utilities	6	\$6,031,000
Management of Companies & Enterprises	36	\$5,977,000
Insurance Carriers & Related Activities	19	\$5,472,000
Truck Transportation	28	\$4,979,000
Repair & Maintenance	48	\$4,804,000
Government: State & Local	12	\$4,307,000
Rental & Leasing Services	14	\$3,887,000
Monetary Authorities - Central Bank	14	\$3,729,000
Food Services & Drinking Places	61	\$3,655,000
Petroleum & Coal Products Manufacturing	1	\$3,462,000
Couriers, Warehousing, & Storage	29	\$2,938,000
Construction & Buildings	13	\$2,775,000
Telecommunications	5	\$2,552,000
Broadcasting (Except Internet)	5	\$1,792,000
Waste Management & Remediation Services	7	\$1,440,000

<b>Industry</b>	<b>Jobs</b>	<b>Business Revenues</b>
Oil & Gas Extraction	3	\$1,381,000
Securities, Commodity Contracts, & Investments	7	\$1,108,000
Data Process & Hosting Services	3	\$1,037,000
Nonmetal Mineral Product Manufacturing	3	\$1,022,000
Postal Service	12	\$1,011,000
Publishing Industries (Except Internet)	6	\$834,000
Building Materials & Garden Materials	7	\$810,000
Rail Transportation	1	\$569,000
Performing Arts & Spectator Sports	14	\$518,000
Transit & Ground Transportation	6	\$469,000
Primary Metal Manufacturing	1	\$463,000
Wood Product Manufacturing	2	\$450,000
Personal Services	8	\$438,000
Mining, Quarrying, & Support	2	\$428,000
Fabricated Metal Manufacturing	2	\$397,000
Gasoline Stations	4	\$396,000
Chemical Manufacturing	0	\$383,000
Pipeline Transportation	1	\$331,000
Credit Intermediation & Related Activities	2	\$284,000
Franchising	0	\$274,000
Plastics & Rubber Products Manufacturing	1	\$225,000
Motion Picture & Sound Recording	1	\$202,000
Printing & Related Support Activities	1	\$184,000
Non-store Retail	2	\$182,000
Motor Vehicle & Parts Dealers	1	\$179,000
Other Information Services	0	\$147,000
Religious, Civic, & Professional Organizations	1	\$139,000
General Merchandise Stores	2	\$136,000
Education Services	2	\$114,000
Air Transportation	0	\$88,000
Food Manufacturing	0	\$87,000
Ambulatory Health Care Services	1	\$86,000
Agriculture & Forestry	3	\$85,000
Water Transportation	0	\$84,000
Food & Beverage Stores	1	\$62,000
Amusement, Gambling, & Recreation	1	\$61,000

Industry	Jobs	Business Revenues
Miscellaneous Stores	1	\$57,000
Paper Manufacturing	0	\$56,000
Funds, Trusts, & Financial Vehicles	0	\$54,000
Sporting Goods, Hobby, Book, & Music	1	\$33,000
Furniture & Home Furnishings Stores	0	\$33,000
Electronics & Appliance Stores	0	\$30,000
Miscellaneous Manufacturing	0	\$29,000
Beverage & Tobacco Product Manufacturing	0	\$17,000
Machinery Manufacturing	0	\$16,000
Government: Federal	0	\$13,000
Electrical Equipment & Appliance Manufacturing	0	\$11,000
Furniture & Home Furnishings Manufacturing	0	\$9,000
Accommodations	0	\$7,000
Health & Personal Care Stores	0	\$7,000
Computer & Electronic Manufacturing	0	\$2,000
Clothing & Clothing Accessories Stores	0	\$1,000
Textile Products Manufacturing	0	\$1,000
Apparel Manufacturing	0	\$0
Hospitals	0	\$0
Household Services	0	\$0
Leather & Allied Product Manufacturing	0	\$0
Museums & Historical Sites	0	\$0
Nursing & Residential Care Facilities	0	\$0
Social Assistance	0	\$0
Textile Mills	0	\$0

Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

## A.5 Expanded Income Re-spending Impacts by Industry

**Chapter 3. Economic Impact Findings** presents the top ten industries with the highest number of jobs and business revenues generated from income re-spending impacts of aviation-related activities. **Table 36** includes all in-state industries with jobs and business revenues generated from income re-spending impacts of aviation-related activities. Industries are listed in descending order of business revenues.

**Table 36: Expanded Income Re-spending Impacts by Industry**

Industry	Jobs	Business Revenues
Real Estate	72	\$53,713,000
Hospitals	194	\$31,988,000

<b>Industry</b>	<b>Jobs</b>	<b>Business Revenues</b>
Ambulatory Health Care Services	260	\$30,442,000
Food Services & Drinking Places	310	\$19,646,000
Wholesale Trade	39	\$11,651,000
Professional, Scientific, & Technical Services	85	\$11,215,000
Insurance Carriers & Related Activities	30	\$11,054,000
Religious, Civic, & Professional Organizations	91	\$9,242,000
Monetary Authorities - Central Bank	30	\$7,626,000
Administrative & Support Services	92	\$7,070,000
Utilities	6	\$5,710,000
General Merchandise Stores	77	\$5,594,000
Nursing & Residential Care Facilities	75	\$5,573,000
Social Assistance	120	\$5,080,000
Repair & Maintenance	50	\$4,863,000
Non-store Retail	38	\$4,383,000
Food & Beverage Stores	59	\$4,221,000
Government State & Local	11	\$3,949,000
Telecommunications	8	\$3,764,000
Funds, Trusts, & Financial Vehicles	10	\$3,335,000
Construction & Buildings	15	\$3,184,000
Health & Personal Care Stores	37	\$3,088,000
Motor Vehicle & Parts Dealers	25	\$2,960,000
Securities, Commodity Contracts, & Investments	22	\$2,904,000
Truck Transportation	16	\$2,871,000
Education Services	51	\$2,685,000
Management of Companies & Enterprises	15	\$2,536,000
Amusement, Gambling, & Recreation	35	\$2,266,000
Gasoline Stations	21	\$2,258,000
Clothing & Clothing Accessories Stores	26	\$2,105,000
Rental & Leasing Services	11	\$2,088,000
Personal Services	65	\$2,001,000
Petroleum & Coal Products Manufacturing	0	\$1,976,000
Miscellaneous Stores	46	\$1,780,000
Couriers, Warehousing, & Storage	18	\$1,746,000
Broadcasting (Except Internet)	4	\$1,526,000
Building Materials & Garden Materials	14	\$1,512,000
Publishing Industries (Except Internet)	9	\$1,320,000
Sporting Goods, Hobby, Book, & Music	23	\$1,113,000

<b>Industry</b>	<b>Jobs</b>	<b>Business Revenues</b>
Electronics & Appliance Stores	13	\$1,070,000
Waste Management & Remediation Services	5	\$1,019,000
Performing Arts & Spectator Sports	19	\$1,006,000
Furniture & Home Furnishings Stores	12	\$996,000
Data Process & Hosting Services	3	\$976,000
Credit Intermediation & Related Activities	6	\$956,000
Oil & Gas Extraction	2	\$831,000
Transportation Support Services	5	\$757,000
Transit & Ground Transportation	9	\$722,000
Postal Service	7	\$646,000
Food Manufacturing	2	\$640,000
Agriculture & Forestry	21	\$455,000
Chemical Manufacturing	0	\$371,000
Motion Picture & Sound Recording	2	\$352,000
Beverage & Tobacco Product Manufacturing	0	\$305,000
Rail Transportation	1	\$284,000
Household Services	19	\$245,000
Water Transportation	0	\$229,000
Pipeline Transportation	0	\$215,000
Other Information Services	0	\$189,000
Nonmetal Mineral Product Manufacturing	1	\$179,000
Printing & Related Support Activities	1	\$151,000
Wood Product Manufacturing	1	\$135,000
Air Transportation	0	\$122,000
Franchising	0	\$114,000
Mining, Quarrying, & Support	0	\$101,000
Museums & Historical Sites	1	\$97,000
Transportation Equipment Manufacturing	0	\$97,000
Government: Federal	0	\$53,000
Plastics & Rubber Products Manufacturing	0	\$50,000
Miscellaneous Manufacturing	0	\$47,000
Accommodations	0	\$32,000
Fabricated Metal Manufacturing	0	\$26,000
Paper Manufacturing	0	\$12,000
Primary Metal Manufacturing	0	\$12,000
Furniture & Home Furnishings Manufacturing	0	\$11,000

<b>Industry</b>	<b>Jobs</b>	<b>Business Revenues</b>
<b>Electrical Equipment &amp; Appliance Manufacturing</b>	0	\$2,000
<b>Machinery Manufacturing</b>	0	\$2,000
<b>Apparel Manufacturing</b>	0	\$1,000
<b>Textile Products Manufacturing</b>	0	\$1,000
<b>Computer &amp; Electronic Manufacturing</b>	0	\$0
<b>Leather &amp; Allied Product Manufacturing</b>	0	\$0
<b>Textile Mills</b>	0	\$0

Source: Calculations by EBP US using IMPLAN V.3 2018, 2021

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## APPENDIX B. CASE STUDIES

### B.1 Introduction

This appendix presents 10 first hand accounts of the tremendous impact of and reliance on aviation in West Virginia that goes beyond quantitative economic findings. A diverse group of individuals were invited to share their unique perspectives and experiences regarding aviation in the state. These individuals include military members, business owners, university faculty, medevac operators, and more. During one-on-one interviews, individuals shared how airports and aviation in the state have shaped their lives, communities, and the state as a whole. The resulting narratives showcase how West Virginia system airports and the aviation industry continue to support a vibrant economy, new opportunities, and resiliency across the Mountain State.

### B.2 Providing Health and Medical Services

System airports support lifesaving and other medical operations across the state. Due to West Virginia's mountainous terrain, airports provide a crucial network of aerial medical emergency response bases to quickly access communities or locations that are difficult to navigate by ground transportation. Not only is air transport used to reach and move patients, but also to transport medical supplies, organs, and doctors and other healthcare professionals to the locations where they are needed.

Separate, but related, the proximity of an airport can highly influence the access and quality of life in a community, which are important factors to attract and retain medical professionals in the state. The case studies presented here highlight the importance of aviation and airports regarding the delivery of health and medical services in West Virginia.

#### B.2.1 HealthNet Aeromedical Services

Clinton Burley is the CEO and president of HealthNet Aeromedical Services, a 501(c)(3) critical care transport program that operates across West Virginia and contiguous states. This non-profit organization is co-operatively owned by three academic medical centers and operates the company's fleet of 12 helicopters from nine bases (eight in West Virginia and one in Kentucky).

Clinton has been with the program since its inception in 1986 and started his career as a flight paramedic. He served in that role for over a decade before transitioning to the management side of the organization, eventually becoming the CEO in 2011. While his role in the organization has changed, his mission and the mission of the program to improve access to critical care has not.

In West Virginia, HealthNet operates and houses 24/7 emergency response teams from eight bases located in Beckley, Buckhannon, Huntington, Lewisburg, Millwood, Morgantown, Martinsburg, and Moundsville. Six of these bases are located at airports that provide facilities and services required for the organization's operations. The necessary facilities include a temperature-controlled, well-lit, high ceiling hangar facility, as well as nearby office space and sleeping quarters for the crew. Some airports have built modular office space on their property to serve HealthNet crew needs. In addition to the physical infrastructure requirements, HealthNet's operations rely on the availability of Jet A fuel at each base. Many of the airports from which they operate offer Jet A and receive revenues from fuel sales. HealthNet supplies fuel trucks at airports that do not offer Jet A.



Outside of the very necessary and important benefit of providing critical care access in remote areas, HealthNet also brings economic benefits to a locality, through creation of well-paying jobs and increased local spending. Each HealthNet base has at least 15 employees, many of whom live in or around the airport community, and spend their wages and participate in the local economy. In addition to jobs and spending, HealthNet services can benefit new business development as employers are often more willing to locate (or relocate) their business in an area where there is immediate access to critical health care.

An example of this is the development of The Summit in the remote mountains of Southern West Virginia. The Summit is a world class adventure base developed by the Boy Scouts of America and is used as the site for the National Scout Jamboree and other corporate retreats. The Summit includes on-site hotel, dormitory, and camping facilities and attracts tens of thousands of visitors each year who participate in an array of adventure and recreational experiences from zip-lining to canoing, mountaineering, rock-climbing, and more. However, one of the deciding factors in bringing this facility to West Virginia was rapid accessibility to a Level I Trauma Center in the event a guest is injured. To facilitate Level I Trauma Center access, The Summit maintains multiple on-site helicopter landing areas. When large numbers of scouts are on-site, HealthNet donates the availability of an additional helicopter and full crew to provide on-site critical care and transport services.

The company also supports the communities in which they are located by providing continuing education opportunities for rural emergency medical services (EMS) agencies that may struggle to access classes and stay current on their skills and strategies. Additionally, the organization engages with local school systems through career events and safety awareness campaigns – particularly during prom season when there is increased concern about the dangers of drinking and driving. HealthNet spreads awareness about the company’s program and the importance of the company’s ability to continue serving their communities through local groups, such as the Rotary Club and Kiwanis organizations.

Clinton expressed the continuing need to support aviation in the state, as local airports are an important piece of the economic development puzzle and are often very unrepresented. HealthNet has been serving rural and remote communities in West Virginia for 35 years, providing critical care transportation to over 90,000 patients. HealthNet could not have this long-lasting and impressive record without the support of local airports and their surrounding communities.

### **B.2.2 United Hospital Center (UHC)**

Laura Blake is the Director of Physician Services at the UHC, in Bridgeport, West Virginia. Her position at UHC is an important one to the community because she is tasked with bringing highly skilled health care professionals to her region. Bringing in quality physicians and health care providers to the Bridgeport community means that UHC can better serve the region’s health care needs.

While Bridgeport is a fairly small community, the local UHC hospital is equipped to serve the entire region, upwards of 300,000 people. The North Central West Virginia Airport (CKB) supports the operation of UHC through the transport of vital supplies and personnel. Laura understands the value of her community airport and, through her recruitment work, demonstrates how the airport is one of many factors that makes Bridgeport an excellent place to call home.

In 2019, the Bridgeport area was voted number 16 in the best cities to live in according to USA Today. This accolade doesn't surprise Laura and it helps her to promote the area to her potential recruits. She remarks that one of the selling points of the community is CKB, adding there aren't many towns in the United States (U.S.) where you can access a commercial service airport that connects you to thousands of destinations and not pay for parking. In addition to providing commercial air service to the region, the airport works diligently to maintain and attract the aerospace industry to the area which has contributed to the area's economic vibrancy.

Just like the UHC facility, the airport is a great asset to the community and provides important services to residents and visitors alike.

### **B.3 Supporting Military Operations**

The West Virginia National Guard comprises the West Virginia Army National Guard (WVARNG) and the West Virginia Air National Guard (WVANG), which include more than 60 units and detachments operating in local communities across the state. In 2018, it was reported that more than 4,200 soldiers and 2,150 airmen comprised the West Virginia National Guard (WVNG). West Virginia's airports support military operations by facilitating training, providing cargo and freight shipment services, and transporting military members to and from their mission assignments.

The WVANG is composed of two units:

- 130<sup>th</sup> Airlift Wing (C-130H) – operates from Yeager Airport (CRW) in Charleston
- 167<sup>th</sup> Airlift Wing (C-17 Globemaster III) – operates from the Eastern West Virginia Regional/Shepherd Field (MRB) in Martinsburg

Additionally, the 772<sup>nd</sup> Troop Command Battalion of the WVARNG operates an aviation unit:

- Company C, 1<sup>st</sup> Battalion, 150<sup>th</sup> Aviation Regiment – uses the Wheeling Ohio County Airport (HLG) in Wheeling

The following two case studies demonstrate the importance of airport access to military operations – specifically those of the 167<sup>th</sup> Airlift Wing and the 150<sup>th</sup> Aviation Regiment of the 772<sup>nd</sup> Troop Command Battalion.

#### **B.3.1 WVANG - 167<sup>th</sup> Airlift Wing**

Major Domenico and Lieutenant Belfield of the WVANG 167<sup>th</sup> Airlift Wing in Martinsburg understand the economic value the unit brings to the region. The 167<sup>th</sup> Airlift Wing is a large operation supporting over 300 full-time jobs and countless part-time opportunities in Martinsburg and surrounding communities. The 167<sup>th</sup> Airlift Wing flies the C-17 Globemaster III for a variety of missions and has been serving in the community for more than 60 years. The unit serves under the motto "Mountaineer Pride Worldwide," showing the unit's commitment to its community and beyond every single day. Based at Eastern West Virginia Regional/Shepherd Field (MRB), the two entities share a runway and a control tower, and rely on the same aircraft rescue and firefighting (ARFF) personnel. While the 167<sup>th</sup> Airlift Wing and the airport have separate fueling facilities there are occasions where those resources are shared too. The 167<sup>th</sup> Airlift Wing provides snow removal equipment (SRE) and services through their civil engineering squadron and contributes some funding to support runway maintenance projects conducted by the airport, such as rubber removal and painting.

This unit supports its community in a number of impactful ways and drives economic growth through employment, technical training, and spending. The unit can have anywhere between 300 to 400 full-time personnel at the base during regular operations whom support the community on a daily basis through spending in the local area. During drill weekends, there can be anywhere from 800 to 900 personnel on the base and local hotels are filled with service members traveling to complete their training. These service members spend money in the local area during their stay, resulting in additional economic activity beyond that generated from staff in full-time positions on the base.

The 167<sup>th</sup> Airlift Wing is involved in a number of community outreach events targeted towards aviation enthusiasts, K-12 students, families and employers of airmen, and the general public. Many members of the 167<sup>th</sup> Airlift Wing have full-time civilian jobs while still fulfilling their duties with the WVANG. In order to create connections between an individual's civilian life and life with the WVANG, they can participate in a Boss Lift event. This event gives an employer the opportunity to gain important insight into what their employees commitment to the WVANG looks like, creating awareness and building connections with civilians. In addition, the unit hosts a Family Day once a year, where airmen can bring their close friends and family to an open house event at the base.

The unit also targets their outreach efforts to children and students in their community, by bringing early awareness to the promising careers and opportunities with the WVANG. The unit hosts MartinsburgStarBase, which is a Department of Defense science, technology, engineering, and mathematics (STEM)-oriented program focused on elementary students in the surrounding area. The 167<sup>th</sup> Airlift Wing also has established a mentoring program with elementary school students where they send Airmen to engage weekly or bi-weekly with participating students. The mentoring program gives students the opportunity to receive help from Airmen on their schoolwork, discuss issues or challenges they may be having, talk about life lessons, and more. The unit also hosts numerous base tours each year to local school and civic groups. Education opportunities extend beyond those offered to K-12 students as the WVANG also offers in-state college tuition assistance for service members.

The community outreach and education opportunities highlight just a few ways the 167<sup>th</sup> Airlift Wing drives economic development through career training and diverse career opportunities. The unit also directly supports MRB by providing a variety of skilled technicians (such as aircraft mechanics, crew chiefs, engineers, pilots, and more) to support commercial airline, cargo, and corporate aviation ventures if/when needed.

When asked about the most rewarding aspects of their careers in the WVANG, Major Domenico and Lieutenant Belfield shared a similar sentiment on the ability to help others, find creative solutions, and support their fellow Airmen. Moreover, Lieutenant Belfield shared that he grew up this area, he's formed lifelong friendships through the WVANG, and being a part of that tight knit community is an incredibly rewarding aspect of his career. The WVANG may be considered one of West Virginia's "best kept secrets" but as the 167<sup>th</sup> Airlift Wing works hard to raise community awareness, more and more people are going to learn about the lifelong opportunities the WVANG can provide and the important role aviation plays in their mission.

### **B.3.2 WVARNG - Company C, 1<sup>st</sup> Battalion, 150<sup>th</sup> Aviation Regiment**

The Company C, 1<sup>st</sup> Battalion is based in Wheeling, West Virginia and is composed of over 100 soldiers ready to support emergencies locally, nationally, and internationally. As part of the larger battalion, the 150<sup>th</sup> Aviation Regiment responds to natural and man-made disasters utilizing a fleet of UH-60 Black Hawk helicopters.

Major Dale, the facility commander of the 150<sup>th</sup> Aviation Regiment, oversees more than 30 full-time guardsmen and numerous other guardsmen who volunteer their time to assist with missions. Major Dale joined the U.S. Army in 2005 which eventually led him to overseeing Reserve Officer Training Corps (ROTC) operations in West Virginia. Major Dale was recommended by a colleague to apply for flight school as an Army aviator. He decided flight school would present a new challenging opportunity and obtained high enough scores to be designated as a top candidate. Now, Major Dale and the 150<sup>th</sup> Aviation Regiment are charged with the important task of maintaining their fleet of Black Hawk helicopters which includes operating the aircraft during emergency response situations, re-fueling, and coordinating aircraft parts, administration, and aircraft maintenance. The 150<sup>th</sup> Aviation Regiment frequently utilizes HLG to maintain regiment-owned aircraft and conduct trainings. The airport is critical to these operations because it provides air traffic services which are required to safely navigate Black Hawks during winter conditions. Additionally, the airport supplies the 150<sup>th</sup> Aviation Regiment with fuel when re-fueling vehicles are not available.

Guardsmen of the 150<sup>th</sup> Aviation Regiment who pilot Black Hawk helicopters average over 1,200 flight hours annually depending on the types of missions for which they are deployed. These guardsmen are also required to clock almost 100 hours of flight training each year to prepare for response including emergency operations, and operations at night and during extreme inclement weather. The 150<sup>th</sup> Aviation Regiment frequently supports the community in Wheeling and residents in other parts of West Virginia in times of flooding, major blizzards, and other emergency situations. They have been deployed in the past to conduct wellness checks and bring supplies to residents during snowstorms, supply water to residents who have lost utility services, bring supplies to communities which are unable to access goods due to bridge washout, and rescue individuals from the rivers of West Virginia.

The 150<sup>th</sup> Aviation Regiment recently began training for aerial firefighting operations due to drought conditions around the state and possibilities for wildfires to occur locally. The 150<sup>th</sup> Aviation Regiment oversees bambi bucket training, a bucket that can hold 600 gallons of water specifically for firefighting operations. Although their firefighting unit isn't large, Major Dale and members of the 150<sup>th</sup> Aviation Regiment responded to the national call for help during the 2020 California wildfires, a series of wildfires in northern California which ravaged the state for several months. Major Dale and three other guardsmen flew 50 hours in the course of 24 days to support firefighting operations in California. They, and units from Arizona, Wisconsin, Iowa, and many other states joined the California National Guard to cooperatively gain control over the fires. Major Dale and members of the 150<sup>th</sup> Aviation Regiment prepared aircraft to conduct initial attacks, cooled fires utilizing helicopters, and scouted to ensure fires had been completely extinguished.

Major Dale spoke about the importance of the 150<sup>th</sup> Aviation Regiment's operations in West Virginia. Over 30 soldiers in the 150<sup>th</sup> Aviation Regiment and over 100 soldiers in the 1<sup>st</sup> Battalion are part of the community's fabric and are ready at all times to respond in any kind of event. Guardsmen live and work within the community and also train tirelessly to respond to emergencies day or night, near and far.

## **B.4 Attracting the Aerospace Industry to West Virginia**

West Virginia's economy has historically been heavily steeped in the energy industry. In recent years, the aerospace industry has seen continual growth around the state. According to the 2019 Aerospace Industry Report published by the West Virginia Development Office, the existing aerospace industry in the state supports 4,000 jobs, \$201 million in payroll, and has a total economic impact of \$1.325 billion. Due to these tremendous impacts, it is especially important for the state to continue seeking out opportunities that attract new aviation businesses and diversify the economy.

### **B.4.1 Mid-Atlantic Aerospace Complex (MAAC)**

Tracy Miller, President of the MAAC, may know, better than most, the strong connection between aviation and economic development. Her years of work and dedication at the MAAC give her a firsthand understanding of the impact that aerospace and manufacturing industries can bring to a community. An integral component of the MAAC's success in attracting some of the biggest names in the aviation and aerospace industry is the location of the MAAC at the North Central West Virginia Airport (CKB). The MAAC is home to operations for Pratt & Whitney Engine Services, Mitsubishi Heavy Industries - Regional Jet (MHIRJ)<sup>1</sup>, and Aurora Flight Sciences of West Virginia – A Boeing Company, among others. Operation of these businesses benefit from access to a runway and flat terrain to expand their physical operations.

CKB provides this needed infrastructure and works hand in hand with the MAAC to attract and maintain a variety of aerospace businesses. The mission of the MAAC is to advance West Virginia's state and regional economy through the advancement and procurement of aerospace industry firms.

Aerospace industry jobs include a range of highly skilled positions in Federal Aviation Administration (FAA)-certified aviation maintenance, manufacturing, engineering, research, and more. The move toward aerospace industry growth is a strategic effort supported by the state to diversify the state economy and reduce reliance on coal, oil, and other resource extraction industries. The aerospace industry has great growth potential due to advancements in technology and a need for new innovative solutions for transportation and shipping. The MAAC brings great growth potential and economic benefits not only to the surrounding communities, but to the broader population of the region and state.

Tracy, and others at the MAAC, work hard to spread the word across the state that the aerospace industry is strong and here to stay so that the broader West Virginia population better understands the value of this industry to their community. The MAAC has formed close regional partnerships, works with the West Virginia Development Office, and collaborates with higher education facilities across the state. These outreach efforts do more than communicate the benefits of the thriving aerospace industry – they demonstrate to local residents a range of aviation career opportunities that exist in the state. Tracy noted that outreach to schools (K-12 and beyond) is one of the most important factors in supporting the aerospace business because there is a high demand for very niche skills, often requiring FAA certification. The local colleges, Pierpont Community & Technical College and Fairmont State University, support advanced aerospace and aviation trades through Part 147 and Part 141 certification programs, respectively. Programs such as these, and outreach

<sup>1</sup> Formerly a Bombardier Facility

to students in a K-12 setting, will only further the aerospace industry growth in West Virginia as more students become aware and excited by the opportunities that exist for them locally.

Tracy looks back with pride and a great sense of accomplishment as she acknowledges the progress the MAAC has made and the benefits it has contributed since its establishment. Not only is there more exposure to the industry, and more people becoming engaged and aware, there are growing numbers of women in aviation, aerospace, and STEM fields in general. Aviation and aerospace have a long history in West Virginia, and Tracy and other industry professionals know the future of this industry is bright. Those working in this industry and involved in growing it know that they can fly higher together, and the MAAC is committed to that journey.

#### **B.4.2 Pratt & Whitney Engine Services**

Pratt & Whitney is a global aerospace company that contributes to the design, manufacturing, and service of aircraft engines and auxiliary power units. Nearly 30 percent of the world's mainline passenger aircraft fleet is powered by a Pratt & Whitney product. As such, Pratt & Whitney's impact on the global aviation industry is significant.

The company's location near the North Central Regional Airport in Bridgeport, West Virginia focuses mainly on engine maintenance, repair, and overhaul (MRO) services, particularly for turboprop and turbofan engines. As part of the MAAC, the engine services they provide are for a range of aircraft, from small commuter aircraft to larger regional jets. Pratt & Whitney has a diverse client base that includes both private and government contracts. Their Bridgeport facility relies heavily on the North Central West Virginia Airport (CKB) for convenient transportation options and where possible, Pratt & Whitney will work closely with other on-airport tenants for different services.

Tim Tucker, General Manager of the Bridgeport Pratt & Whitney location, noted it is easy to see the company's commitment to advancing the aviation industry and supporting the growth of the community. The Bridgeport location employs almost 400 staff, with approximately 30 percent at retirement age. While this points to an incredibly experienced and tenured staff, many with over 20 years of experience, it also indicates there is growing need for the next generation of aerospace employees.

Tim is well aware of this impending employee demographic change and the company is working diligently within the community to attract new staff. Thankfully, there are numerous connections within the community to promote careers in aerospace and aviation at the high school and college level. Aviation programs are being implemented into Harrison County high schools' curriculum, focusing on aerodynamics and exposing youth in the community to the strong opportunities in the industry. As noted in the previous study, the local colleges, Pierpont Community & Technical College and Fairmont State University, support advanced aerospace and aviation trades through Part 147 and Part 141 certification programs, respectively. Pratt & Whitney offers internship programs which accepts students from both schools and many of the internships translate into full-time career opportunities.

Pratt & Whitney's community involvement doesn't stop at education. The company works closely with the local Emerging Leaders Group, the Chamber of Commerce, and subcontract services from local businesses to bolster local and regional economic growth. The company also gives back to their community with food drives and other charitable events.

Tim sees the strong future of the aerospace and aviation industry because aviation has always been about growth and untapped possibilities. He notes that the very existence of this industry is a testament to the idea that if we can think it, we can achieve it. The opportunities in West Virginia for strong and impactful careers in aerospace and aviation are almost endless. Those interested in a career in aviation will know that West Virginia, particularly CKB, is the place to come and achieve those aspirations. Opportunities like these help maintain a strong, local work force, keeping jobs in West Virginia and growing a strong economy that is focused on the future of aerospace science and technology.

### **B.4.3 Helicopter Powerline Services**

Helicopter Powerline Services is an industry leader in helicopter powerline construction, aerial sawing, and right-of-way (ROW) management based at the Mercer County Airport (BLF) in Bluefield, West Virginia. The company provides services across the state and outside of the state (typically working east of the Mississippi River) with work recently conducted in both Wisconsin and Connecticut. While their services are wide ranging, they primarily work in ROW clearing and powerline services.

Adam Hayhurst, the lead airframe and powerplant (A&P) mechanic at Helicopter Powerline Services, says the relationship between the company and BLF is strong, and both rely on each other in different ways. Being able to set up their business at an airport allows Helicopter Powerline Services to maintain their FAA Part 133 certification, which requires that this type of business have an airport as their base of operations. Additionally, the airport provides office facilities and hangar space to accommodate their fleet of three helicopters and future plans to include twin-engine aircraft with heavier load capacities. In return, the airport benefits from having a successful aviation company through lease payments and fuel sales. The airport's ability to provide the facilities and services needed by Helicopter Powerline Services also may attract other businesses to the airport that require similar accommodations.

Being involved in the industry, it is easy for Adam to see the benefits the airport and airport tenants bring to the community. When possible, Adam hires locally, providing well-paying jobs to the community which spurs spending in the region. Moreover, Helicopter Powerline Services is committed to educating local students about the great opportunities in aviation-related industries.

Adams says that finding this career opportunity for himself was a blessing. He was able to learn an in-demand technical skill that allows him to work closely with a team, have autonomy over his career, and support his family. As such, having the opportunity to better educate youth on the possibilities in aviation careers has been incredibly important to him. While the work can be challenging at times, it is very rewarding. Adam enjoys working closely with the other members of his team, which include a pilot, the fuel truck driver, a mechanic, and several linemen.

There are many rewarding aspects about his job, noting "...the ability to identify, assess, and resolve a mechanical issue requires close attention to detail and a great level of skill and is very rewarding work. You get to see the results of your hard work." For example, he noted that he was recently out of town on a job site when the helicopter was having an issue starting. Adam had to quickly assess and resolve the issue so that the job could be completed successfully and within the necessary time frame. In that moment he was not only responsible for the crew's ability to complete the job, but he was responsible for their safety as well. He noted that solving problems and ensuring his team's safety makes the job rewarding and valuable.

Adam understands that the community may not always see the value of their local airport, or understand the opportunities that exist within the industry, but he and others are committed to spreading the word about how valuable their local airport is, and the importance of aviation in the state.

## **B.5 Inspiring New Aviation Professionals**

As previously noted, the aerospace industry in West Virginia is growing rapidly due to the availability of a skilled workforce, concentration of repair facilities, and strategic development efforts. To support this growth, new aviation professionals must be prepared to enter a workforce that demands highly-skilled and highly-qualified individuals. West Virginia continues to prepare for increased demands for aviation professionals through the expansion of higher educational opportunities, national recruitment, and encouraged of people of all ages to consider a future in the industry.

### **B.5.1 Marshall University - Division of Aviation**

Marshall's Division of Aviation anticipates offering two degree programs: 1) a Bachelor of Science (B.S.) degree in Commercial Pilot: Fixed-Wing through the Bill Noe Flight School and 2) an Associate of Applied Science (A.A.S.) degree in Aviation Maintenance in cooperation with Mountwest Community and Technical College and the Robert C. Byrd Institute (RCBI). The proposed curricula for both degrees will prepare students with the educational foundation and the hands-on technical experience to be successful in their future aviation careers.

On August 13<sup>th</sup>, 2020, ground was broken to construct the new Marshall University Bill Noe Flight School at Yeager Airport (CRW) in Charleston. The brand-new facilities include a 10,000-square-foot classroom and hangars to house the school's aircraft fleet. The school will initially offer an FAA-certified Part 141 pilot school, with new students anticipated to take their classes at the facility in the fall of 2021. Students going into the FAA-certified commercial pilot training program will benefit from the real-life expertise of aviation professionals in the industry, gain invaluable hands-on experience, and will leave the program well-trained for their future career. Through the program, students will have access to cutting-edge technology, such as a state-of-the-art flight simulator and multiple aircraft to earn the flight hours necessary to become a commercial pilot. Students will graduate from the program as certified commercial pilots with their instrument flight rating and have the potential to enter the workforce as commercial pilots, flight instructors, private pilots, and more.

The Aviation Maintenance program offered by Marshall University in partnership with the Mountwest Community and Technical College and the RCBI will be headquartered at the Tri-State/Milton J. Anderson Field (HTS) in Huntington with classes starting in the spring of 2022. Pending FAA Part 147 Certification, this program will serve southern West Virginia and the Tri-State region. Administered by RCBI, the program will train students for careers as airframe and powerplant (A&P) mechanics for the commercial and general aviation industry. To bridge the gap between traditional aviation education and emerging technologies, the program will partner with key industry players such as Snap-On Tools, Composite Education Services, and the American Society for Testing and Materials (ASTM) to stress additional certifications in structural sheet metal, avionics, and composite materials – areas identified by industry partners as having a critical need. Officials expect the program to serve as an economic catalyst by producing the highly



skilled workforce required by the AEROready-certified region (AEROready means the 16 primary counties served by the program have the existing infrastructure to support new aerospace development). This 18-month program will emphasize the development of transferable skills that also equip students for jobs in other vibrant regional industry sectors such as automotive, maritime, oil and gas, and renewable energy.

Pilots and skilled maintenance technicians are in great demand and there is overwhelming interest in these degree programs. Marshall's Division of Aviation is working with national airlines and regional aviation maintenance and technology companies to develop training that addresses the specific needs of the aviation industry while also building workforce pipelines for graduates. As the mix of industries in West Virginia continues to transform, Marshall University is developing a workforce necessary to advance the aviation industry. As an integral community resource, Marshall University has a responsibility to support the economic vitality in the state. The aviation school can act as an essential catalyst to a vibrant economy.

### **B.5.2 HQ Aero Management Inc. (HQ Aero)**

HQ Aero connects aviation and aerospace industries across West Virginia with the most highly-qualified individuals. HQ Aero provides aviation staffing and recruitment services to businesses with a mission to match them with exceptional aviation professionals. Ron Eagle is the President of HQ Aero and has witnessed the company grow alongside the aviation industry that he supports.

Ron's experience in aviation started with avionics maintenance on fighter jet aircraft during his time in the military which took him across the globe. As a native West Virginian, he was offered an opportunity to return home to work at Bombardier in Bridgeport. Ron stated that he found there was a real need to connect aviation and aerospace organizations with the right individuals and he did just that.

In 2000, HQ Aero began offering their expertise in aviation to satisfy the dual purposes of offsetting the ebbs and flows of aviation staffing and helping to employ the skilled individuals at the right organizations. Due to their success, HQ Aero has expanded into larger facilities located near the North Central West Virginia Airport (CKB) in Bridgeport and opened a second office in Oviedo, Florida. Ron states that the need for their services are going to continue to be in high demand as more investment is being made to attract more aviation opportunities in West Virginia. HQ Aero has helped the growth of the aviation industry cluster located at the MAAC as their company recruits certified professionals from across the U.S. Ron stated that HQ Aero's operations are complimented by the local aviation school and offer a huge benefit to attracting new businesses to the Mountain State. "When [economic development offices] are recruiting new companies to the state, many organizations ask about the available workforce. These offices would be able to tell them that not only does the state have schools that produce high-quality workers, but we also have a company that connects them with a qualified workforce from across the U.S."

There is some cause for concern about the future of aviation, Ron states. "There is a pilot and manpower shortage in the industry due to retirement. This is a huge detriment to the industry because those years of expertise and experience is lost when they retire and that knowledge is not passed down [to the next generation of professionals]. Aviation schools are seeing an increase in enrollment, but there are not enough schools to support meeting this need."

To generate new interest in aviation careers and warrant new investment in aviation-related higher education, Ron suggests bringing back airshows to the community. “Airshows can increase the demand to join this workforce. We need to ask how we influence the younger generation and how do we get them involved? The last airshow [at CKB] was in 2001 and drew huge crowds. This was a huge benefit for the community, and it showed them different aircraft and the possibility and range of careers in aviation.” HQ Aero works in partnership with the local aviation school to showcase different aviation professions to school-aged children and get them interested in pursuing aviation in the future.

In terms of how aviation influences his day-to-day life, Ron indicated that the most rewarding part of being in the industry is that he gets to essentially “...help people find a home [in West Virginia], gain employment, and be happy, while always keeping the customer supplied and mission-ready.” He believed that the community recognizes the importance of airports and aviation through their experiences using airports for travel, but if they viewed the other aspects such as labor force and jobs, people might find the true value in how they impact the economy.

### **B.5.3 Bart Rogers - Airshow Organizer and Historian**

Bart Rogers is the resident air show organizer and historian at the Eastern West Virginia Regional Airport - Shepherd Field (MRB) in Martinsburg. Bart’s colorful past stems from his incredible passion for aviation. He light-heartedly attributes his passions to getting “bit by the aviation bug” when he joined the industry as a pilot for the U.S. Navy. After flying for the military, Bart returned home to West Virginia and worked at the fixed-base operator (FBO) at the North Central West Virginia Airport (CKB) as a corporate pilot. During his time there, he and his brother dreamed of owning and operating their own FBO and went to tour the existing facilities at MRB. The pair fell in love with the airport, but ultimately decided against purchasing the FBO. Years later, Bart returned to the Martinsburg area to earn his degree at Shepherd College and has contributed much to the community since.

Bart served for 25 years as a Metals Conservator (an individual who works to preserve historic and/or rare metal objects such as coins, badges, tool, etc.) for the United States National Park Service. As a Metals Conservator his duties included creating collection management plans (specific programs to preserve a collection of historic items for display or storage) for different Park Service facilities. In conjunction with his love for aviation, his experience in collection management and 15 years as a volunteer for the West Virginia Civil Air Patrol, made Bart a well-known and well-respected authority for aviation history in the state. He has since lent his expertise on a number of exhibits and aviation museums in the state including the existing museum of aviation history at MRB.

Currently, Bart can be found working on a new aviation library that will be featured at the airport. In the beginning, Bart shared his treasure trove of aviation books by installing five bookshelves in the existing pilot’s lounge. Due to its popularity and an acquisition of an even larger collection, the project has taken on a life of its own with a dedicated facility at the airport. His ultimate vision for the library is for it to become a community resource where other passionate individuals can learn more about different aspects of aviation. Eventually, his hope is that the library will not only attract like-minded people, but younger members of the community interested in aviation. He envisions school tours and partnerships will inspire a new generation of aviation professionals and will become an homage to the airport’s early days when it also served as an aviation outreach center in the 1920’s for the community.

Bart's enthusiasm for cultivating the airport's value as a community resource doesn't end there. He has served as a volunteer coordinator for a number of air shows at MRB in the past. His first experience putting on an air show was during the airport's 80<sup>th</sup> birthday where he coordinated with the local chapter of the Experimental Aircraft Association (EAA) and organized speakers to celebrate the huge milestone at the airport.

Bart animatedly spoke about how air shows should be a requirement at airports due to their huge community impact, "...people love airports and airplanes – all the noise and the dust – they love all of it." He noted that they work in coordination with the West Virginia Air National Guard and most of the proceeds go to benefit the United Way. He noted, "It's a great fundraiser and we have got to get back to doing more air shows." Not only do air shows bring a community together, they inspire people in the community and empower them to want to pursue a lifelong career in aviation.

He states that with the development in the area, the airport serves as a huge community resource in an economic sense. He expressed that some people realize there's an airport in their community, but it brings so much in terms of economic activity for the region.

# APPENDIX C. ECONOMIC RELIANCE OF WEST VIRGINIA BUSINESSES ON AVIATION

## C.1 Introduction

Beyond the economic contributions of airport operations in West Virginia, both airside and landside, and of airport-enabled visitor spending, West Virginia airports play an additional economic role in supporting business operations. West Virginia airports enable businesses in the state to transport commodities and finished goods both from suppliers and to customers located in both long-distance domestic and international markets. Without support provided by air cargo services, the markets available to West Virginia companies would be curtailed due to the increased time required for transportation. Additionally, West Virginia businesses rely on aviation to connect with their customers, other parts of their corporate network, and for access to specialized talent located outside the state.

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) report evaluates these impacts through two approaches:

1. Summarizing the results of the Aviation-Reliant Business & Business Aircraft Owner Survey in which businesses reported on how they utilize airports to support their operations; and
2. A quantitative analysis of freight and economic data to estimate the off-airport impact of air cargo services.

## C.2 Business Reliance Survey Findings

### C.2.1 Profile of Businesses Surveyed

From the Airport Manager Survey, businesses that use West Virginia airports in some way were identified. These businesses were surveyed and 33 responses were received, which represent 14 different industries. Combined, these businesses have over 16,000 full-time employees, with an additional 2,500 part-time workers (see **Table 1**). The median business respondent reported 48 employees, showing that the sample skews towards smaller businesses. Nineteen of the 33 (57 percent) responses were from firms with fewer than 100 employees.

**Table 1: Business Reliance Survey Respondents by Industry**

Industry Sector	Number of Firms	Number of Full-Time Employees	Number of Part-Time Employees
Accommodation	3	65	11
Agriculture	1	13	0
Arts, Entertainment, and Recreation	1	400	250
Construction	2	100	3
Educational Services	3	750	201
Finance and Insurance	2	196	0

Industry Sector	Number of Firms	Number of Full-Time Employees	Number of Part-Time Employees
Health Care	5	2,512	725
Manufacturing	5	9,937	1,011
Mining, Quarrying, and Oil & Gas Extraction	1	1,500	300
Other Services (Except Public Administration)	1	30	0
Professional, Scientific, and Technical Services	1	2	2
Retail Trade	4	422	11
Transportation & Warehousing	2	26	6
Utilities	2	230	5
<b>Total (14 Industries)</b>	<b>33</b>	<b>16,183</b>	<b>2,525</b>

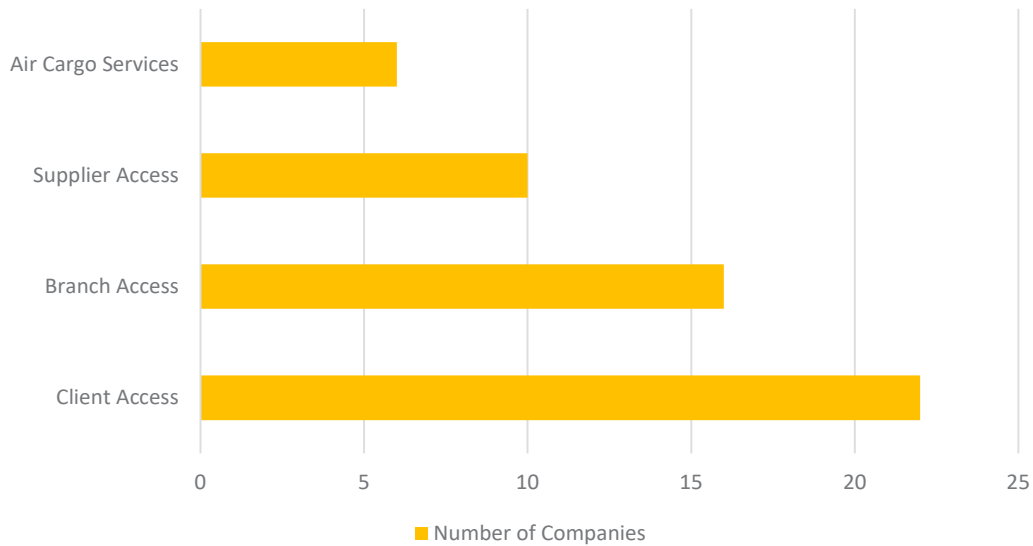
Sources: WV AEIS Aviation-Reliant Business & Business Aircraft Owner Survey, 2020; Calculations by EBP US, 2021

### C.2.2 Reported Business Reliance

Each business surveyed reported the percentage of employees who interacted with the aviation system in the state of West Virginia. The average of these numbers was approximately 22 percent. Each business also estimated their proportional usage of commercial and general aviation (GA) services. Two thirds of responding companies (22 of 33) companies reported that they used GA more than commercial service for business purposes. Moreover, on average, the 33 responding companies reported that 70 percent of their interactions with local aviation services were with GA.

The most common purpose of aviation use for the companies surveyed was to reach clients (22 respondents), followed by branch access (16), then supplier access (10), and air cargo services (6), as shown in **Figure 1**.

**Figure 1: Utilization of Aviation by Reliant West Virginia Companies**



Sources: WV AEIS Aviation-Reliant Business & Business Aircraft Owner Survey, 2020; Calculations by EBP US, 2021

Some businesses reported that they do not use aviation services themselves but are reliant on local airports to bring customers to them. For example, the Hampton Inn near the Wheeling Ohio County Airport (HLG) frequently lodges flight crews who operate out of that airport. Similarly, the Enterprise location near Morgantown Municipal - Walter L. Bill Hart Field (MGW) supports 17 jobs due to air passengers renting vehicles when they come to town. The impacts of these visitors are calculated in other components of this study.

For other companies, aviation enables local businesses to fly in specialists from around the country to service the needs of the population of West Virginia. For example, Mountain State Oral & Facial Surgeons relies on GA airports to fly doctors from around the country to 11 in-state surgical centers. Without access to these GA facilities, they suspect that “our business would suffer and the residents of West Virginia would have much fewer head and neck surgery options for high quality care.”

The five manufacturing companies surveyed represented almost 11,000 employees. However, none of these companies reported shipping goods through West Virginia airports. A total of six out of the 33 survey respondents reported using air cargo services. These six firms represented the following industries:

- Health Care (2) – 419 employees (biomedical goods)
- Retail Trade – 24 employees (furniture)
- Mining, Quarrying, and Oil and Gas Extraction – 1,800 employees (aircraft & machinery parts)
- Transportation and Warehousing – 15 employees (aircraft parts)
- Construction – 48 employees (aircraft parts)

The survey provided a snapshot of how some specific businesses utilize different components of West Virginia’s aviation system. The next section focuses on utilizing freight and economic data to get a broader view of how businesses across the state rely on air cargo services.

## C.3 Air Cargo Economic Impact Analysis

### C.3.1 Introduction

The air cargo economic impact analysis assesses the reliance of off-airport industries in West Virginia on cargo that is transported through West Virginia airports and calculates the economic contributions of this air cargo to off-airport businesses statewide and by region. This analysis does not include the impacts of on-airport air cargo jobs, which are covered by other components of the WV AEIS.

The analysis evaluates how air cargo services provided by West Virginia airports support local economic development through connectivity to distant markets, and is documented in the following sections:

- Data Sources
- Air Cargo Volume and Value
- Summary of the Off-Airport Economic Impact of West Virginia’s Air Cargo
- Methodology for Calculating the Economic Impact of Air Cargo

### C.3.2 Data Sources

Three air cargo data sources were used to conduct the analysis of off-airport air cargo economic impacts:

- **WISERTrade** reports weights and values of each commodity shipped to or from international destinations that are collected by the United States (U.S.) Foreign Trade Division of the U.S. Census Bureau. These reports are specific to airports but are limited to international trade. Commodities are classified according to the Harmonized System.<sup>1</sup> The WISERTrade data provides data on international cargo handling at Yeager Airport (CRW) in Charleston but does not include any other airports in the state of West Virginia.
- **The Freight Analysis Framework (FAF)**, produced by the Bureau of Transportation Statistics and the Federal Highway Administration (FHWA), integrates data from a variety of sources to create a comprehensive picture of cargo movement between U.S. geographic zones, including major metropolitan areas and the remaining non-metropolitan areas of each state. Data for West Virginia were provided at the state level only. FAF provides data for all modes of transportation including aviation for commodities at the two-digit level of the Standard Classification of Transported Goods (SCTG) codes. The FAF is primarily based on the 2012 Commodity Flow Survey and was last updated in 2018.
- **The Air Carrier Statistics Database**, also known as T-100, refers to domestic and international airline market and segment data.<sup>2</sup> The data includes reports from certificated U.S. air carriers on monthly air carrier traffic information using Form T-100. These data can

<sup>1</sup> *The Harmonized System is the predominant international commodity classification usage for international trade and is used by over 200 countries for assessing tariffs. EBP has developed a crosswalk between the two commodity codes for cohesive reporting and analysis.*

<sup>2</sup> *Segment data counts the value for each leg of a trip, while market data only counts enplaned passengers/cargo once so long as they remain on the same aircraft. For these reasons, segment data often includes larger numbers than market data.*

be used to determine the total volume of cargo handled at specific airports. T-100 does not provide any detailed information about that cargo, such as the true origin and final destination of the goods, or commodities that are carried. Therefore, it cannot be used alone to determine how air cargo interacts with the local economy.

The T-100 data were used to determine a control or maximum total of tonnage for the domestic FAF data, and volumes of cargo were scaled down proportionately. The T-100 control total specifically excludes cargo being shipped through the FedEx hub at Tri-State/Milton J. Ferguson Field (HTS) in Huntington, as much of this cargo does not interact with the West Virginia economy.<sup>3</sup> International air cargo volumes from WISERTrade were then combined with the scaled down domestic FAF data to form a comprehensive freight database for the state.

In addition to the above outlined air cargo data sources, the air cargo economic impact analysis also relies on economic data to relate the movement of goods to its role in the West Virginia economy. County-level economic business revenue data by industry sectors were assembled by IMPLAN from federal sources, primarily the U.S. Bureau of Economic Analysis (BEA). Data assembled by IMPLAN provide detail on the commodities used in the production of goods for each industry by county. These data also allow for the estimation of commodities produced by West Virginia industries and sold out of state. Freight data and economic impact models were linked to identify the portion of industry activity that is reliant on air cargo by overlaying commodity flows, economic geography, and industries' production processes, which provides an assessment of how air cargo affects the state economy outside of airports.

### C.3.3 Air Cargo Volume and Value

**Table 2** shows the total value (in 2019 dollars) and volume of air cargo (from 2018, the latest available information) moving in and out of West Virginia airports that interact with the local economy. These numbers exclude cargo that simply passes through local airports, and thus may be smaller than other tabulations of air cargo movements.

**Table 2: Air Cargo Volumes by Direction in 2018**

Cargo Direction	Value (2019\$)	Tonnage
Inbound	\$38.1M	785
Outbound	\$19.4M	205

Sources: Data from FAF and WISERTrade, scaled to match T-100 volumes, assembled and calculated by EBP US, 2021.

A very small volume of international cargo is flown directly to or from West Virginia. Of the \$38 million of goods that are flown to and consumed within West Virginia, only a few thousand dollars of cargo originates internationally. More than 99.9 percent of international air cargo utilizes out of state airports in nearby cities like Washington, D.C. or Pittsburgh, Pennsylvania.

**Table 3** presents the distribution of commodities being shipped to and from West Virginia in terms of the top five inbound and outbound commodities in terms of value.

<sup>3</sup> To reiterate an earlier important statement, all jobs and economic activity associated with FedEx at this airport is captured through the airport's economic impact analysis.



**Table 3: Volumes of Air Cargo used by West Virginia Industries: Top Five Domestic Air Commodities by Value of Inbound and Outbound Movements in 2018**

Commodities Type	Tons	Value (Millions of 2019\$)	Percentage of Value
<b>Outbound Commodities</b>			
Machinery	65	16.7	86.3%
Transportation Equipment	77	0.8	4.2%
Base Metals	<1	0.2	1.0%
Articles of Base Metals	<1	0.1	0.5%
Precision Instruments & Apparatus	4	0.1	0.5%
Other	57	1.4	7.3%
<b>Total Commodities</b>	<b>205</b>	<b>\$19.4</b>	<b>100%</b>
<b>Inbound Commodities</b>			
Motorized Vehicles	499	14.1	37.2%
Precision Instruments & Apparatus	52	12.5	32.9%
Pharmaceutical Products	23	5.1	13.6%
Machinery	25	1.9	5.1%
Electronics and Electrical Equipment	48	0.9	2.4%
Other	138	3.3	8.6%
<b>Total Commodities</b>	<b>785</b>	<b>\$38.1</b>	<b>100%</b>

*Note: Totals may not equal the sum of rows due to rounding. Sources: Data from FAF and WISERTrade, scaled to match T-100 volumes, assembled and calculated by EBP US, 2021*

More than 90 percent of the value of outbound air cargo from West Virginia is comprised of Machinery or Transportation Equipment. No other commodities have a significant value.

Inbound air cargo is dominated by the domestic import of motorized vehicles and their parts, with almost \$14 million being flown to West Virginia annually, accounting for more than one-third of the value of all inbound air cargo. Precision Instruments and Apparatus, which includes photographic and optical equipment, account for another one-third of the value of air cargo. West Virginia also receives significant amounts of pharmaceutical products via air.

### C.3.4 Off-Airport Economic Impact of West Virginia Air Cargo

The economic impact analysis revealed that air cargo services support hundreds of jobs off-airport and contribute over \$70 million in business revenues statewide. **Table 4** includes the direct impact of air cargo services to off-airport activities. It also shows the two streams of multiplier effects: 1) supplier sales and 2) income re-spending in West Virginia. These multiplier effects stem from both the benefit of business-to-business transactions and income earned by workers due to production and sales enabled by West Virginia airports' off-airport economic impact.

**Table 4: Statewide Air Cargo Dependency**

Impact	Jobs	Payroll	Value Added	Business Revenues
<b>Direct</b>	231	\$14,311,000	\$21,947,000	\$47,354,000
<b>Supplier Sales</b>	74	\$3,986,000	\$6,407,000	\$12,418,000
<b>Income Re-spending</b>	91	\$3,935,000	\$7,180,000	\$12,648,000
<b>Total</b>	<b>396</b>	<b>\$22,232,000</b>	<b>\$35,534,000</b>	<b>\$72,420,000</b>

*Note: Totals may not equal the sum of rows due to rounding. Sources: Data from FAF and WISERTrade, 2020; Calculations by EBP US using IMPLAN V.3 2018, 2021*

### C.3.5 Air Cargo Analysis Methodology

This section provides a brief overview of the methodology for calculating the off-airport economic impact of air cargo.

Commodities produced by industries are shipped to destinations, where they are consumed by industries as inputs to their production (referred to as “intermediate inputs”) or as final demand by households.

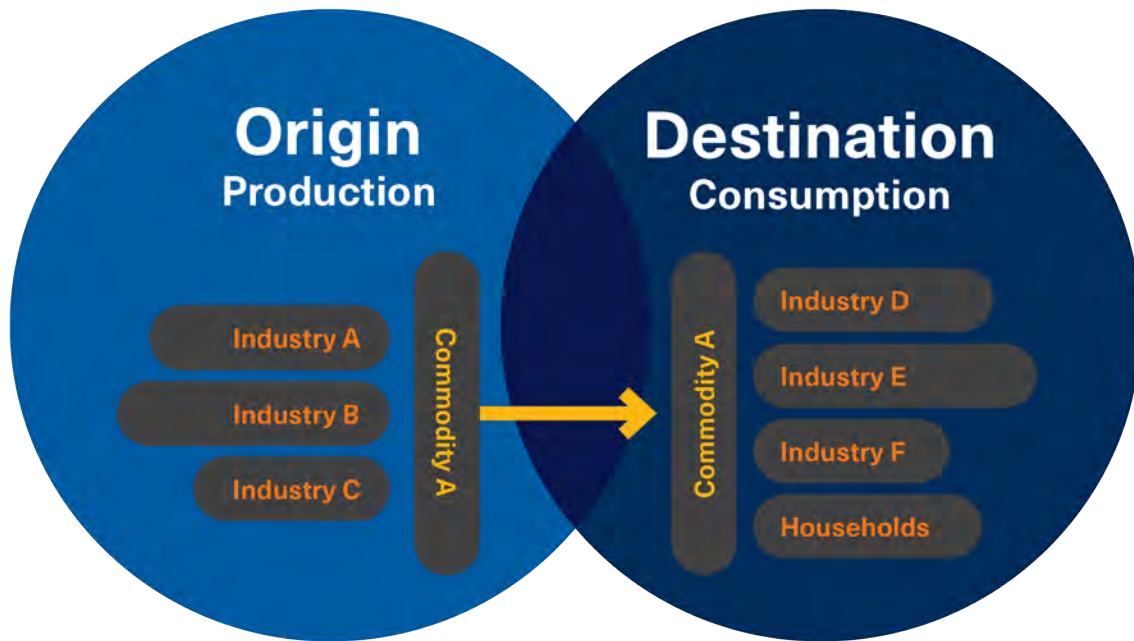
**Figure 2** illustrates the relationships between industries and commodities.

These relationships are traced to track the importance of air cargo to West Virginia.

An example of an **intermediate input** may be a plate of steel produced in West Virginia and flown to Michigan where the steel is integrated into automotive production.

An example of a **product shipped for final demand** is a pharmaceutical product manufactured in West Virginia and flown to Florida (the product itself may be handled by wholesalers and retailers, but it is purchased directly by consumers at drug stores without further processing).

**Figure 2: Schematic Presentation of Inter-industry Commodity Flows (Cargo Flows) Between Regions**



Sources: Kimley-Horn, 2021; EBP US, 2021

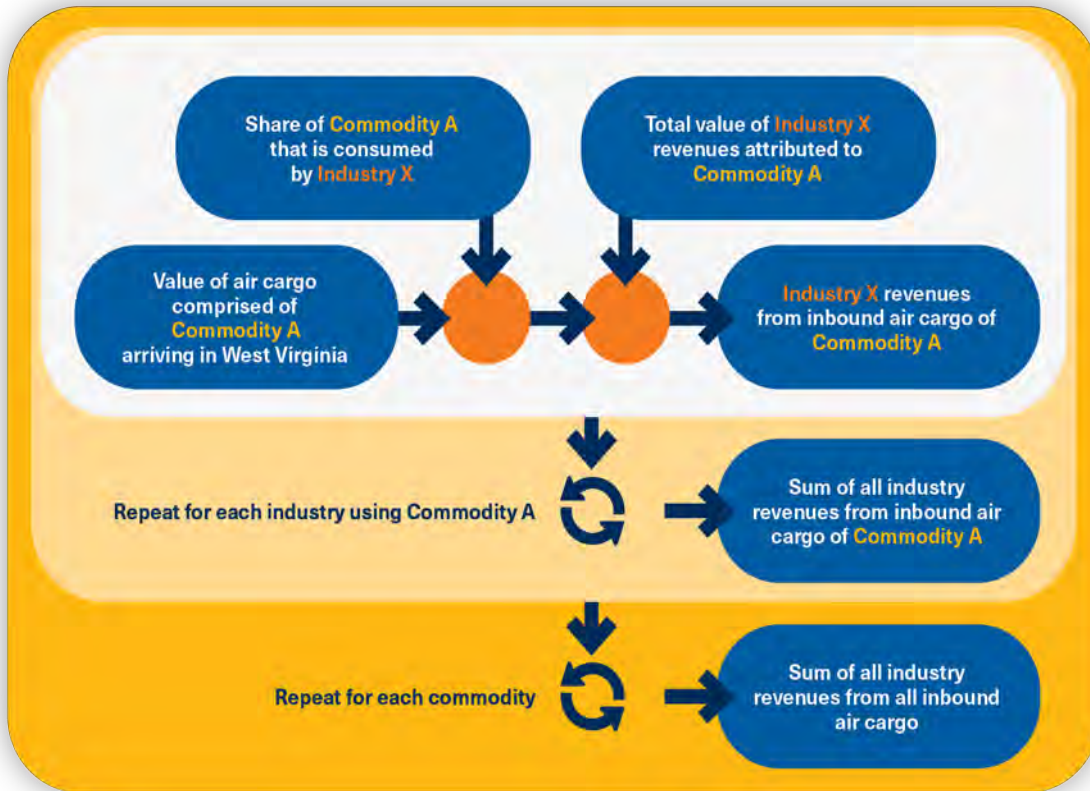
This analysis considers inbound flows (air cargo deplaned or offloaded in West Virginia) and outbound flows (air cargo enplaned or loaded into planes in West Virginia) to provide a complete picture of the dependence of West Virginia’s economy on air cargo. Commodities produced outside the state and flown into West Virginia may be used as intermediate inputs to industries in West Virginia or as final demand by consumer households, driving the economy. Commodities produced in West Virginia and flown out of the state represent income accumulating to the state’s economy.

The analysis is based on economic data describing the relationship between industries and commodities (which does not consider how commodities are moved) and mode-specific trade data about the type of transport used for different commodities. A key step adjusts industry dependence on commodities by how much they rely on air travel to assess the dependence of West Virginia industries on air cargo.<sup>4</sup>

The analysis process is repeated for many commodities, each of which are consumed and produced by many industries. The data components of the inbound air cargo analysis and their relationship throughout the repetitions are shown in **Figure 3**. The flowchart concentrates on inbound air shipments of ‘Commodity A.’ In the lightest color box at the top, calculations for businesses in ‘Industry X’ are shown as an example. There are 14 major industry groups in which 544 industries considered by this analysis can be grouped. The flowchart shows how this analysis is repeated for each of the 13 other industry groups (in the example flowchart or 543 other industries in the calculations) and their use of ‘Commodity A.’ The final darkest box represents repeating this analysis for each commodity type.

<sup>4</sup> Alternative freight modes to air cargo include truck, rail, or barge movements. The economy also depends on those modes. This analysis focuses only on air cargo’s role.

**Figure 3: Analysis Flow Chat for Inbound Air Shipments**



Sources: Kimley-Horn, 2021; EBP US, 2021

The impacts of outbound cargo flows are calculated using a methodology nearly identical to the process used to determine the impact of inbound air cargo (**Figure 3**). The only difference is the utilization of industry value added instead of total sales values. The inbound and outbound analyses are repeated for each commodity to represent the proportion of the West Virginia economy that is supported by air cargo services.

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## APPENDIX D. INDIVIDUAL AIRPORT REPORTS

Appendix D features an airport-specific report for each of the 24 study airports. Each report is two pages in length and includes airport-specific data related to facilities and activities, and features the airport’s individual economic contribution to West Virginia’s economy. The reports also include system wide economic impact findings for additional context. The airport reports are presented in alphabetical order by associated city with commercial service airports presented first, followed by general aviation (GA) airports, as shown in **Table 1**.

**Table 1: Order of Individual Airport Reports**

Associated City	Airport Name	FAA ID
<b>Commercial Service</b>		
<b>Beckley</b>	Raleigh County Memorial	BKW
<b>Charleston</b>	Yeager	CRW
<b>Clarksburg</b>	North Central West Virginia	CKB
<b>Huntington</b>	Tri-State/Milton J. Ferguson Field	HTS
<b>Lewisburg</b>	Greenbrier Valley	LWB
<b>Morgantown</b>	Morgantown Municipal - Walter L. Bill Hart Field	MGW
<b>Parkersburg</b>	Mid-Ohio Valley Regional	PKB
<b>General Aviation</b>		
<b>Bluefield</b>	Mercer County	BLF
<b>Buckhannon</b>	Upshur County Regional	W22
<b>Cumberland</b>	Greater Cumberland Regional	CBE
<b>Elkins</b>	Elkins-Randolph County - Jennings Randolph Field	EKN
<b>Fairmont</b>	Fairmont Municipal - Frankman Field	4G7
<b>Logan</b>	Logan County	6L4
<b>Martinsburg</b>	Eastern West Virginia Regional/Shepherd Field	MRB
<b>Moundsville</b>	Marshall County	MPG
<b>Petersburg</b>	Grant County	W99
<b>Philippi</b>	Philippi/Barbour County Regional	79D
<b>Pineville</b>	Kee Field	I16
<b>Point Pleasant</b>	Mason County	3I2
<b>Ravenswood</b>	Jackson County	I18
<b>Summersville</b>	Summersville	SXL
<b>Sutton</b>	Braxton County	48I
<b>Wheeling</b>	Wheeling Ohio County	HLG
<b>Williamson</b>	Appalachian Regional	EBD

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# BKW

## RALEIGH COUNTY MEMORIAL AIRPORT

Raleigh County Memorial Airport is a commercial service airport that provides daily non-stop flights to Parkersburg, and Charlotte, North Carolina, through Contour Airlines, and supports the general aviation (GA) community with a full-service fixed-based operator (FBO) on the field. The airport offers flight training and aircraft maintenance through their FBO, Albatross Air. The airport and FBO work hard to introduce the younger population to exciting careers in aviation, including offering scholarships to high school students interested in flight instruction. The airport also provides Federal Aviation Administration (FAA) Part 139 fire training to the local volunteer fire department. An industrial park is co-located with the airport, spanning approximately 300 acres and hosts a variety of businesses that serve the surrounding region. New expansions are underway at the airport for the aerospace industry, including runway access site development and partnership agreements with New River Community Technical College for a FAA-certified Part 147 Aviation Maintenance and Technician School. Additionally, the nearby West Virginia University Institute of Technology offers a four-year degree in Aerospace Engineering.

### AIRPORT ACTIVITIES



**Corporate/  
 Business Activity**



**Aircraft Flight  
 Testing**



**Career Training/  
 Flight Instruction**



**Medical Transport/  
 Evacuation**



**Search and Rescue/  
 Civil Air Patrol**

**City:** Beckley  
 (BKW is approximately 3 miles east)

**County:** Raleigh

**Tourism Region:**  
 New River-Greenbrier Valley

**Ownership:** Public

**Primary Runway 01/19:**  
 6,750' x 150'



*Photo courtesy of the Civil Air Patrol*

### AIRPORT CLASSIFICATION

Raleigh County Memorial Airport is one of seven commercial service airports in West Virginia's aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including GA. The airport is classified by the FAA as a Nonprimary – Regional airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).





# AVIATION'S ECONOMIC IMPACT

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Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts are also generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 GA airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

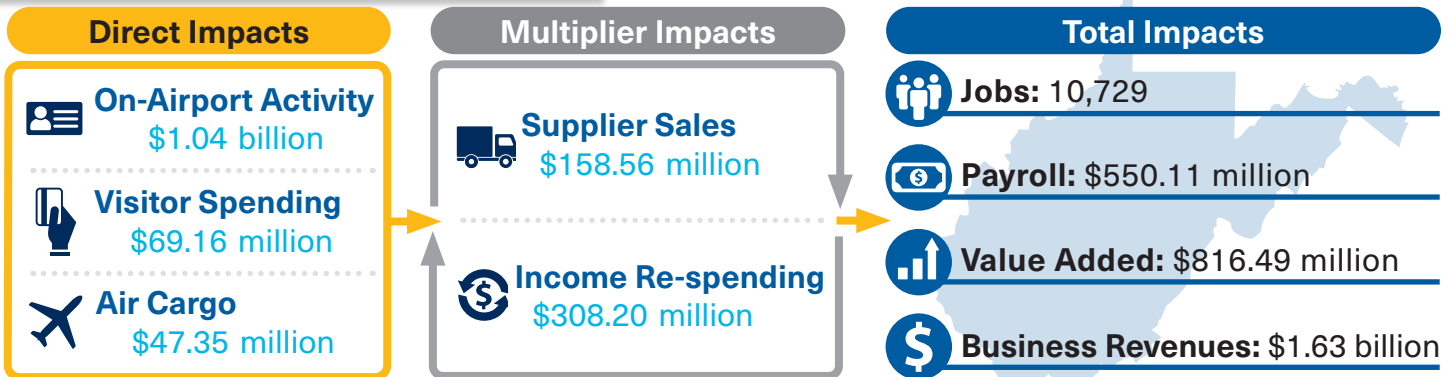
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Raleigh County Memorial Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	74	\$3,774,000	\$5,215,000	\$9,599,000
<b>Visitor Spending</b>	16	\$449,000	\$752,000	\$1,437,000
<b>Total Direct Impacts</b>	90	\$4,224,000	\$5,966,000	\$11,036,000
<b>Supplier Sales</b>	21	\$1,075,000	\$1,666,000	\$3,305,000
<b>Income Re-spending</b>	29	\$1,153,000	\$1,720,000	\$3,692,000
<b>Total Multiplier Impacts</b>	50	\$2,228,000	\$3,386,000	\$6,997,000
<b>Total</b>	<b>141</b>	<b>\$6,452,000</b>	<b>\$9,352,000</b>	<b>\$18,033,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBPA US using IMPLAN V.3 2018, 2021.

# CRW

## YEAGER AIRPORT

Yeager Airport is the busiest commercial service airport in West Virginia and is located in the state capital of Charleston. Yeager Airport has service provided by American Airlines, Delta Air Lines, United Airlines, and Spirit Airlines with nonstop service to Charlotte; Washington, D.C.; Philadelphia; Chicago; Atlanta; Orlando; and seasonally to Myrtle Beach. Yeager Airport also has a full-service fixed-base operator (FBO) for general aviation (GA) users and is considered one of West Virginia's home bases for military flight training operations. The airport is home to the Woody Williams Military Operations Center that provides a variety of amenities, including a flight planning room and a 12,000-square-foot heated hangar with direct access to the ramp. The airport also hosts the McLaughlin Air National Guard Base, 130<sup>th</sup> Airlift Wing. In addition to the strong military presence, the airport partners with the Bill Noe Flight School at Marshall University to support multiple degree programs in aviation. The Bill Noe Flight School will be opening a new Federal Aviation Administration (FAA)-certified Part 141 flight school at the airport in 2021. Currently, there are only two other Part 141 flight school in West Virginia. The airport is committed to remaining a major gateway connecting West Virginia residents to far-reaching destinations well into the future and is dedicated to strategic and innovative practices that enhance their positive impact on the community.

### AIRPORT ACTIVITIES



**Military Exercises/  
Training**



**Corporate/  
Business Activity**



**Career Training/  
Flight Instruction**



**Aerial Inspections**



**Medical Transport/  
Evacuation**

**City:** Charleston  
 (CRW is approximately 3 miles east)

**County:** Kanawha

**Tourism Region:** Metro Valley

**Ownership:** Public

**Primary Runway 06/23:**  
 6,715' x 150'



### AIRPORT CLASSIFICATION

Yeager Airport is one of seven commercial service airports in West Virginia's aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including GA. The airport is classified by the FAA as a Primary – Nonhub airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

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## Economic Impact Indicators

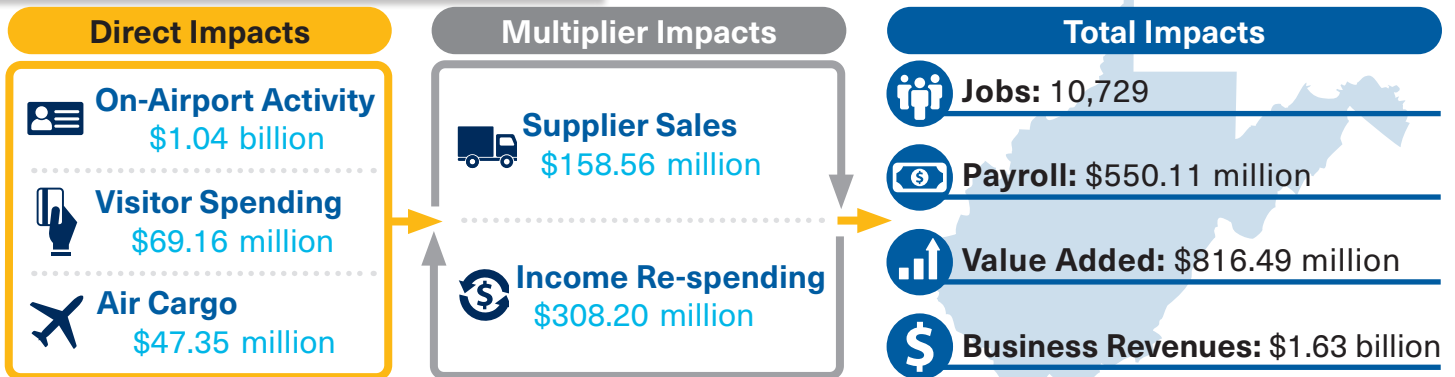
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**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Yeager Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	1,982	\$67,535,000	\$86,395,000	\$107,062,000
<b>Visitor Spending</b>	381	\$10,826,000	\$18,170,000	\$35,033,000
<b>Total Direct Impacts</b>	2,363	\$78,361,000	\$104,565,000	\$142,095,000
<b>Supplier Sales</b>	158	\$8,714,000	\$13,728,000	\$25,518,000
<b>Income Re-spending</b>	418	\$19,075,000	\$28,578,000	\$57,692,000
<b>Total Multiplier Impacts</b>	576	\$27,789,000	\$42,306,000	\$83,211,000
<b>Total</b>	<b>2,940</b>	<b>\$106,150,000</b>	<b>\$146,871,000</b>	<b>\$225,306,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# CKB

## NORTH CENTRAL WEST VIRGINIA AIRPORT

North Central West Virginia Airport is the fastest growing commercial service airport in West Virginia, known for its convenience and award-winning customer service. United Airlines offers daily jet service with connections in Chicago and Washington, D.C., and low-cost carrier, Allegiant, offers seasonal service to Orlando, Destin, Myrtle Beach, and Chicago. The airport's fixed-base operator (FBO), V1 Aviation, accommodates general and corporate aviation traffic on a 7,800' runway with a Federal Aviation Administration (FAA) air traffic control tower. The Mid-Atlantic Aerospace Complex (MAAC) is located on the airport and is comprised of aviation and aerospace industry leaders, including Fortune 500 companies that provide first-class innovation, development, maintenance, and other services for the aerospace industry. The aerospace cluster at North Central West Virginia Airport also includes the niche training needed in the aerospace industry, including FAA-certified Part 147 Aviation Maintenance Technician School through Pierpont Community & Technical College and FAA-certified Part 141 Professional Flight programs through Fairmont State University. The airport's support of a growing technology and aviation industry contributes to the region being consistently rated amongst USA Today's best cities to live in.



### AIRPORT ACTIVITIES



**Aerospace  
 Manufacturing**



**Aerospace Technology  
 Research**



**Corporate/  
 Business Activity**



**Military Exercises/  
 Training**



**Career Training/  
 Flight Instruction**

**City:** Clarksburg  
 (CKB is approximately 1 mile NE)

**County:** Harrison

**Tourism Region:**  
 Mountaineer Country

**Ownership:** Public

**Primary Runway 03/21:** 7,800' x 150'

### AIRPORT CLASSIFICATION

North Central West Virginia Airport is one of seven commercial service airports in West Virginia's aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including general aviation (GA). The airport is classified by the FAA as a Primary – Nonhub airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

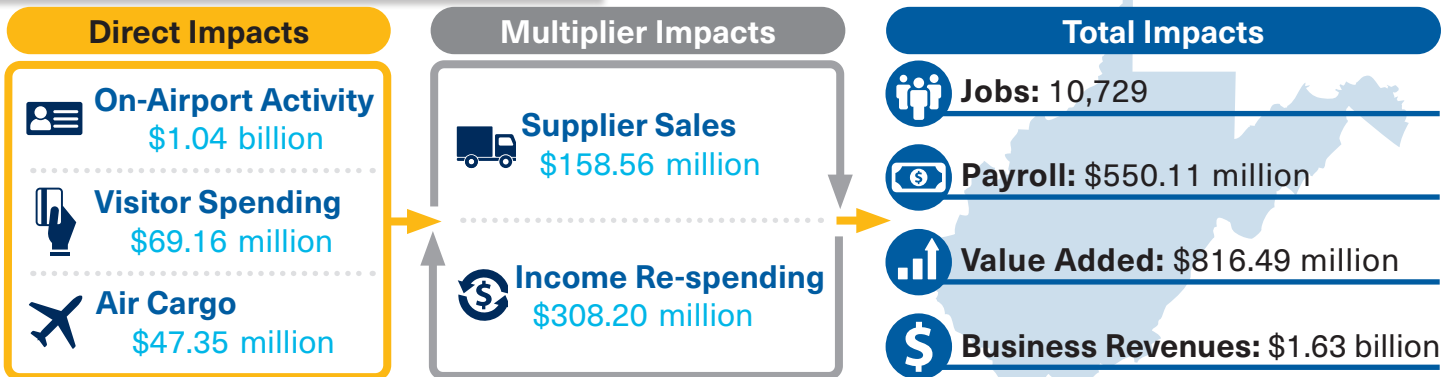
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## North Central West Virginia Airport's Economic Impacts

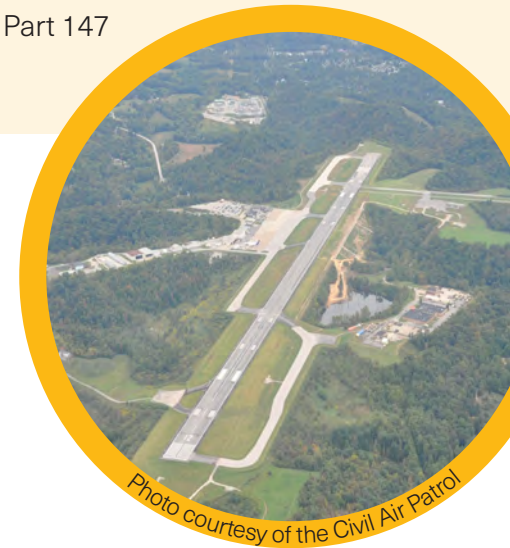
	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	1,267	\$118,077,000	\$220,049,000	\$621,192,000
<b>Visitor Spending</b>	58	\$1,489,000	\$2,468,000	\$4,917,000
<b>Total Direct Impacts</b>	1,325	\$119,566,000	\$222,517,000	\$626,109,000
<b>Supplier Sales</b>	308	\$18,292,000	\$27,809,000	\$54,595,000
<b>Income Re-spending</b>	712	\$30,320,000	\$45,378,000	\$94,744,000
<b>Total Multiplier Impacts</b>	1,020	\$48,612,000	\$73,188,000	\$149,338,000
<b>Total</b>	<b>2,345</b>	<b>\$168,177,000</b>	<b>\$295,704,000</b>	<b>\$775,448,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. CKB's "2019 Economic Activity Analysis" accounted for off-airport employment which is not reflected in this study to maintain consistency among study airports. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# HTS

## TRI-STATE/MILTON J. FERGUSON FIELD

Tri-State/Milton J. Ferguson Field is a commercial service airport that serves nearby communities from West Virginia, Kentucky, and Ohio. The airport offers regularly scheduled commercial service passenger flights on Allegiant Airlines to destinations in South Carolina and Florida, while American Airlines provides service to Charlotte, North Carolina. The airport also caters to the general aviation (GA) community through its fixed-based operator (FBO), Huntington Jet Center, which offers a modernized pilot's lounge, flight planning area, and other amenities. Tri-State/Milton J. Ferguson Field is home to both FedEx Freight and FedEx Express which facilitate the shipping and distribution of cargo freight and goods in the region. The airport is partnering with Marshall University's Bill Noe Flight School to establish a Federal Aviation Administration (FAA)-certified Part 147 Aircraft Maintenance and Technician School located at the airport.



**City:** Huntington  
 (HTS is approximately 3 miles south)

**County:** Wayne

**Tourism Region:**  
 Hatfield McCoy Mountains

**Ownership:** Public

**Primary Runway 12/30:**  
 7,017' x 150'

### AIRPORT ACTIVITIES



**Corporate/  
 Business Activity**



**Medical Transport/  
 Evacuation**



**Military Exercises/  
 Training**



**Career Training/  
 Flight Instruction**



**Aerial Photography/  
 Surveying**

### AIRPORT CLASSIFICATION

Tri-State/Milton J. Ferguson Field is one of seven commercial service airports in West Virginia's aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including GA. The airport is classified by the FAA as a Primary – Nonhub airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

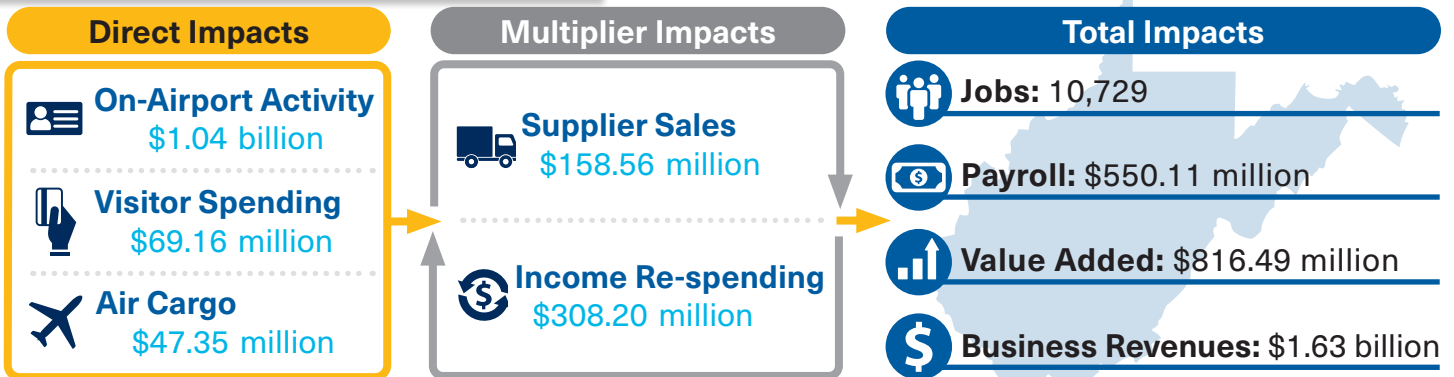
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Tri-State/Milton J. Ferguson Field's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	260	\$13,188,000	\$19,422,000	\$35,142,000
<b>Visitor Spending</b>	55	\$1,593,000	\$2,584,000	\$5,068,000
<b>Total Direct Impacts</b>	315	\$14,781,000	\$22,006,000	\$40,210,000
<b>Supplier Sales</b>	65	\$3,280,000	\$5,148,000	\$10,202,000
<b>Income Re-spending</b>	90	\$3,553,000	\$5,304,000	\$11,516,000
<b>Total Multiplier Impacts</b>	155	\$6,833,000	\$10,453,000	\$21,717,000
<b>Total</b>	<b>471</b>	<b>\$21,614,000</b>	<b>\$32,459,000</b>	<b>\$61,927,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# LWB

## GREENBRIER VALLEY AIRPORT

Greenbrier Valley Airport is in the heart of the beautiful Greenbrier Valley in Lewisburg, West Virginia. Named “America’s Coolest Small Town” by Budget Travel Magazine in 2011, this town is full of unique community and regional assets that make it a sought-after destination. The airport provides scheduled airline service on United Airlines to Chicago and Washington, D.C. and supports general aviation (GA) activities through a full-service fixed-base operator (FBO). The airport’s close proximity to the Lewisburg community is essential for business and leisure travelers arriving by commercial service or private aircraft. Visitors can enjoy a vibrant downtown district that has impressive historic and cultural value, such as one of only four Carnegie Hall’s in the world still in continuous use and Greenbrier Valley Theatre, the State Professional Theatre of West Virginia. The airport also sees significant passenger activity traveling to Greenbrier Valley Airport to reach The Greenbrier, a world-famous resort located just 12 miles from the airport. The resort brings crowds of visitors to the region year-round.



**City:** Lewisburg  
 (LWB is approximately 3 miles north)

**County:** Greenbrier

**Tourism Region:**  
 New River-Greenbrier Valley

**Ownership:** Public

**Primary Runway 04/22:** 7,003' x 150'

### AIRPORT ACTIVITIES



**Corporate/  
 Business Activity**



**Medical Transport/  
 Evacuation**



**Aerial Inspections**



**Police/Law  
 Enforcement**



**Career Training/  
 Flight Instruction**

### AIRPORT CLASSIFICATION

Greenbrier Valley Airport is one of seven commercial service airports in West Virginia’s aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including GA. The airport is classified by the Federal Aviation Administration (FAA) as a Primary – Nonhub airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).





# AVIATION'S ECONOMIC IMPACT

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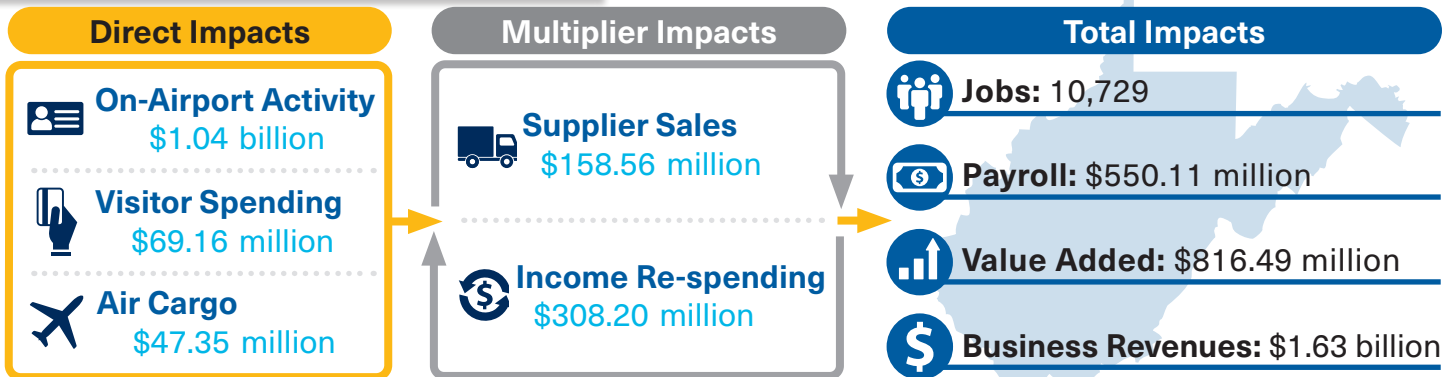
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Greenbrier Valley Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	100	\$5,720,000	\$11,319,000	\$20,384,000
Visitor Spending	136	\$3,795,000	\$6,400,000	\$11,779,000
<b>Total Direct Impacts</b>	<b>236</b>	<b>\$9,515,000</b>	<b>\$17,719,000</b>	<b>\$32,163,000</b>
Supplier Sales	64	\$3,095,000	\$4,983,000	\$9,858,000
Income Re-spending	66	\$2,650,000	\$3,951,000	\$8,484,000
<b>Total Multiplier Impacts</b>	<b>130</b>	<b>\$5,744,000</b>	<b>\$8,934,000</b>	<b>\$18,342,000</b>
<b>Total</b>	<b>365</b>	<b>\$15,260,000</b>	<b>\$26,652,000</b>	<b>\$50,505,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# MGW

## MORGANTOWN MUNICIPAL - WALTER L. BILL HART FIELD

Morgantown Municipal - Walter L. Bill Hart Field is a commercial service airport that provides daily flights operated by Southern Airways Express to Baltimore-Washington International in Maryland and Pittsburgh International in Pennsylvania, allowing users access to both domestic and international destinations from those airports. The airport recently broke ground on a 1,001-foot-long runway extension project to improve runway safety and better accommodate all airport users. Due to the airport's close proximity to West Virginia University (WVU), it is frequently used by parents, alumni, and other competing teams during the Big 12 sports season and constitutes the busiest time for general aviation (GA) activity in the area. Multiple medical flight companies conduct daily transport and evacuation operations from Morgantown Municipal - Walter L. Bill Hart Field as two major hospitals are located within the vicinity of the airport. In addition to serving the local community through emergency health services, the airport supports a Young Eagles program which introduces school-aged children to careers in aviation. The airport provides terminal space, a staging area, security measures, and waives landing fees, allowing operators to provide free flights to hundreds of children annually.



### AIRPORT ACTIVITIES



**Corporate/  
 Business Activity**



**Medical Transport/  
 Evacuation**



**Career Training/  
 Flight Instruction**



**Skydiving/  
 Parachute Jumping**



**Aircraft Flight  
 Testing**

**City:** Morgantown  
 (MGW is approximately 3 miles east)

**County:** Monongalia

**Tourism Region:**  
 Mountaineer Country

**Ownership:** Public

**Primary Runway 18/36:** 5,199' x 150'

### AIRPORT CLASSIFICATION

Morgantown Municipal - Walter L. Bill Hart Field is one of seven commercial service airports in West Virginia's aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including GA. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Regional airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts are also generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 GA airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

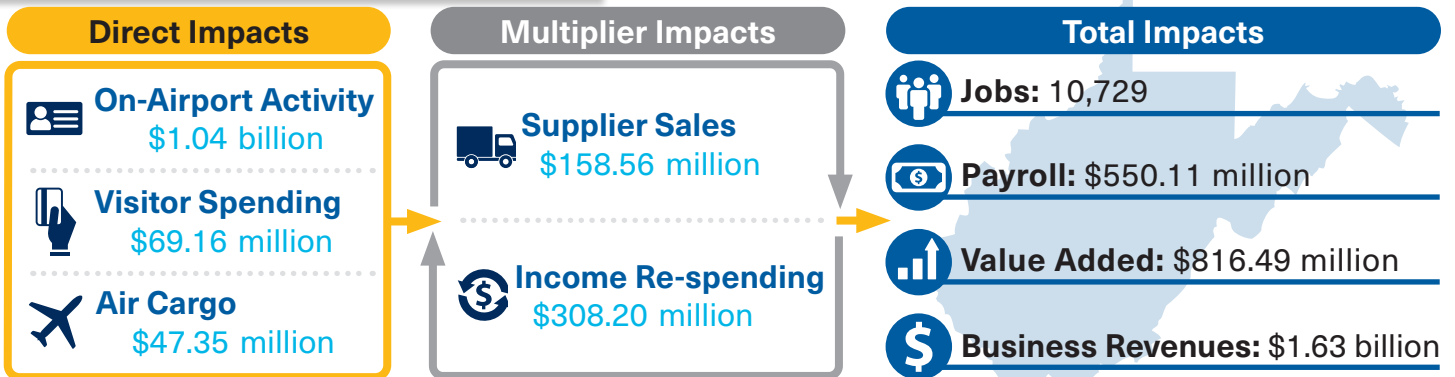
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Morgantown Municipal - Walter L. Bill Hart Field's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	130	\$6,804,000	\$10,265,000	\$21,662,000
<b>Visitor Spending</b>	54	\$1,345,000	\$2,183,000	\$4,268,000
<b>Total Direct Impacts</b>	184	\$8,149,000	\$12,448,000	\$25,931,000
<b>Supplier Sales</b>	50	\$2,519,000	\$4,016,000	\$7,991,000
<b>Income Re-spending</b>	59	\$2,516,000	\$3,762,000	\$7,860,000
<b>Total Multiplier Impacts</b>	109	\$5,035,000	\$7,778,000	\$15,851,000
<b>Total</b>	<b>293</b>	<b>\$13,184,000</b>	<b>\$20,226,000</b>	<b>\$41,782,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# PKB

## MID-OHIO VALLEY REGIONAL AIRPORT

Mid-Ohio Valley Regional Airport is a commercial service airport that provides scheduled airline service to Charlotte, North Carolina, through Contour Airlines. The airport also operates full-service general aviation (GA) facilities, including a recently remodeled pilot's lounge. The airport is equipped with a crosswind runway and supports all types of instrument approaches. This also makes the airport a popular training destination, as pilots-in-training can use the airport for all levels of licensure. The airport has goals to establish a full flight school at the facility and would convert the vacant former Army National Guard buildings on-site into classrooms and facilities. The Army National Guard is still on-site, employing over 200 people (some part-time), but recently moved to newer facilities. The airport builds strong community ties by hosting fly-ins, interacting with the Experimental Aircraft Association (EAA) Young Eagles, and offering a much-loved airport restaurant – Jerry's Fly Away Kitchen. It is not uncommon to have lines forming out the door on Sunday mornings for the freshly baked pies at the restaurant, which attracts aviation and non-aviation customers alike.



**City:** Parkersburg  
 (PKB is approximately 6 miles northeast)

**County:** Wood

**Tourism Region:** Mid-Ohio Valley

**Ownership:** Public

**Primary Runway 03/21:** 7,240' x 150'

### AIRPORT ACTIVITIES



**Career Training/  
 Flight Instruction**



**Corporate/  
 Business Activity**



**Police/Law  
 Enforcement**



**Military Exercises/  
 Training**



**Medical Transport/  
 Evacuation**

### AIRPORT CLASSIFICATION

Mid-Ohio Valley Regional Airport is one of seven commercial service airports in West Virginia's aviation system. Commercial service airports offer scheduled air carrier services and are critical access points to larger metropolitan areas in the state. These airports often facilitate travel between domestic and international destinations and accommodate a larger variety of users and services, including GA. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Regional airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

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This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

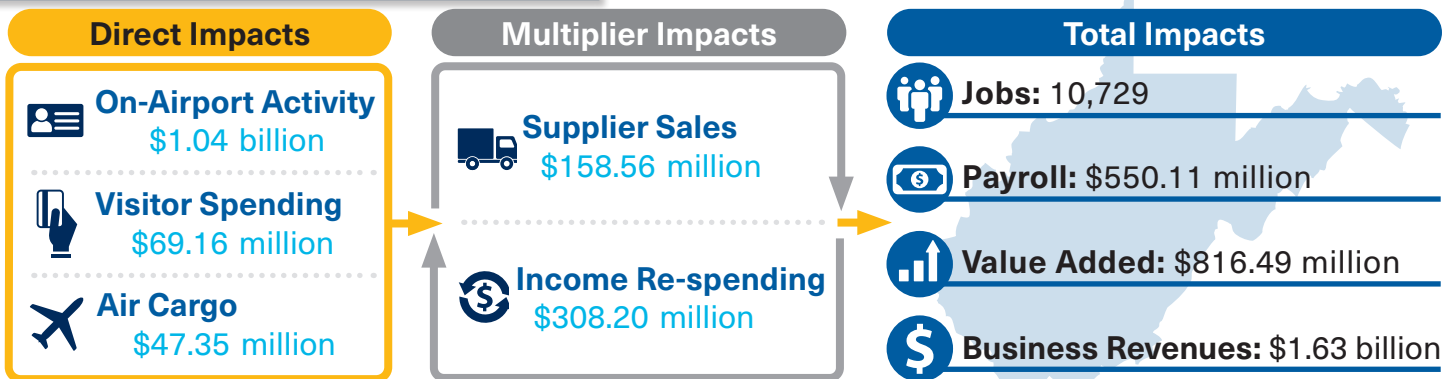
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Mid-Ohio Valley Regional Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	580	\$61,448,000	\$73,128,000	\$92,139,000
<b>Visitor Spending</b>	24	\$554,000	\$934,000	\$1,889,000
<b>Total Direct Impacts</b>	604	\$62,001,000	\$74,062,000	\$94,028,000
<b>Supplier Sales</b>	96	\$4,580,000	\$7,471,000	\$15,300,000
<b>Income Re-spending</b>	350	\$13,819,000	\$20,659,000	\$44,635,000
<b>Total Multiplier Impacts</b>	446	\$18,399,000	\$28,130,000	\$59,935,000
<b>Total</b>	<b>1,050</b>	<b>\$80,400,000</b>	<b>\$102,191,000</b>	<b>\$153,963,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# BLF

## MERCER COUNTY AIRPORT

Mercer County Airport is a bustling general aviation (GA) facility located between Princeton and Bluefield that serves southern West Virginia and surrounding communities. The airport opened in 1954 and provided scheduled airline service until 2007. The airport works diligently to support business aviation by forming strong community and business partnerships with local agencies and the general public. In addition to an airport-managed fixed-base operator (FBO), the airport is home to Helicopter Powerline Services, a Federal Aviation Administration (FAA)-certified Part 133 operation that provides services for powerline construction, aerial sawing, and right-of-way management. The airport also attracts many visitors to the area for nearby recreational activities, including the ATV Hatfield & McCoy Trail System. An annual Coal Show brings international crowds to the area, and the aircraft parking apron fills up with visiting transient aircraft. The airport also hosts its own Annual Airshow, a six-year-running tradition that attracts visitors from surrounding communities and both entertains and educates them on the value of aviation. Airport staff are also active in educating students, and they visit local schools across the county by helicopter.



**City:** Bluefield  
 (BLF is approximately 3 miles NE)

**County:** Mercer

**Tourism Region:**  
 New River-Greenbrier Valley

**Ownership:** Public

**Primary Runway 05/23:**  
 4,743' x 100'

### AIRPORT ACTIVITIES



**Corporate/  
 Business Activity**



**Aerial Inspections**



**Medical Transport/  
 Evacuation**



**Career Training/  
 Flight Instruction**



**Police/Law  
 Enforcement**

### AIRPORT CLASSIFICATION

Mercer County Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the FAA as a Nonprimary – Regional airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

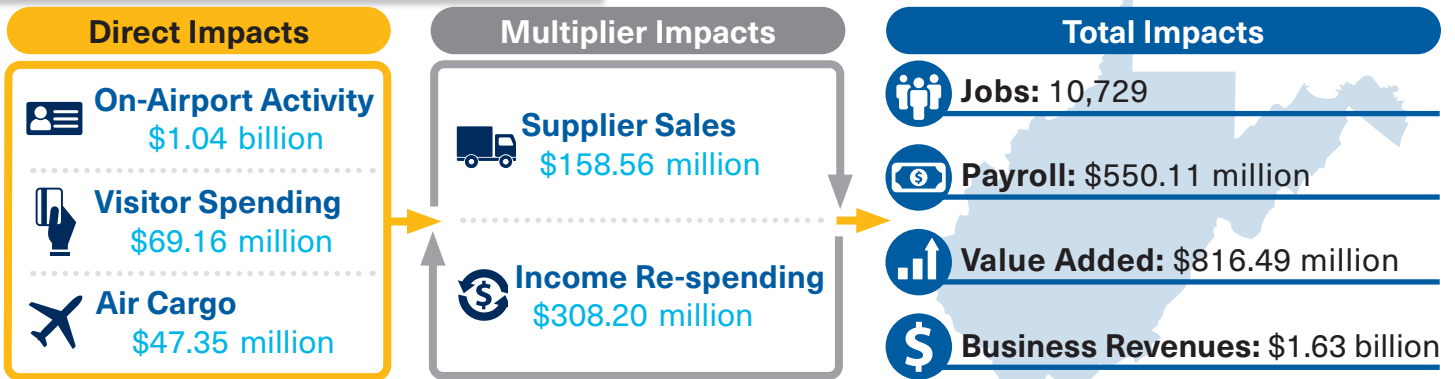
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Mercer County Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	29	\$1,047,000	\$1,562,000	\$2,731,000
<b>Visitor Spending</b>	21	\$483,000	\$763,000	\$1,563,000
<b>Total Direct Impacts</b>	50	\$1,530,000	\$2,325,000	\$4,294,000
<b>Supplier Sales</b>	7	\$334,000	\$541,000	\$1,088,000
<b>Income Re-spending</b>	17	\$681,000	\$1,015,000	\$2,182,000
<b>Total Multiplier Impacts</b>	24	\$1,015,000	\$1,556,000	\$3,270,000
<b>Total</b>	<b>74</b>	<b>\$2,545,000</b>	<b>\$3,881,000</b>	<b>\$7,564,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# W22

## UPSHUR COUNTY REGIONAL AIRPORT

Upshur County Regional Airport is a general aviation (GA) facility which provides services to Upshur and Lewis counties. The airport is located at an elevation of 1,635 feet above sea level, providing a nearly fog-free airport with visibility up to 20 miles in all directions. The current facility replaced the original landing strip in 1998, which was located at the base of the hill the airport currently sits on. The original landing strip was used by the nearby West Virginia Wesleyan College as a pilot pre-flight training facility for World War II. Today, Upshur County Regional Airport is used as a regional hub for multiple daily medical flights conducted by its tenant, HealthNet Aeromedical Services. HealthNet houses a 24/7 emergency response team at the airport to quickly transport patients to nearby medical facilities, cutting down transportation time to a quarter of what it would take by ground transport. The airport also serves as a base for operations related to interstate improvement coordination, aerial sawing, and rabies population control methods across the region.



**City:** Buckhannon  
 (W22 is approximately 2 miles west)

**County:** Upshur

**Tourism Region:** Mountain Lakes

**Ownership:** Public

**Primary Runway 11/29:** 4,201' x 75'

### AIRPORT CLASSIFICATION

Upshur County Regional Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more emergency medical services, civil air patrol, and land surveying. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Unclassified airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



### AIRPORT ACTIVITIES



**Medical Transport/  
 Evacuation**



**Sightseeing**



**Corporate/  
 Business Activity**



**Aerial Inspections**



**Police/Law  
 Enforcement**



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

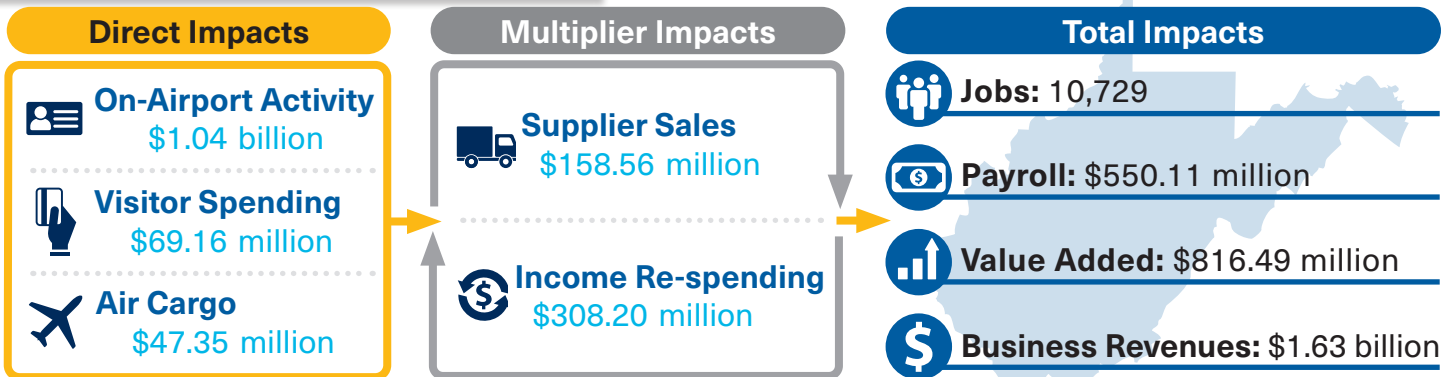
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Upshur County Regional Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	25	\$1,887,000	\$2,512,000	\$5,024,000
Visitor Spending	2	\$52,000	\$83,000	\$173,000
<b>Total Direct Impacts</b>	<b>27</b>	<b>\$1,939,000</b>	<b>\$2,595,000</b>	<b>\$5,198,000</b>
Supplier Sales	8	\$383,000	\$628,000	\$1,305,000
Income Re-spending	12	\$459,000	\$686,000	\$1,509,000
<b>Total Multiplier Impacts</b>	<b>20</b>	<b>\$842,000</b>	<b>\$1,314,000</b>	<b>\$2,815,000</b>
<b>Total</b>	<b>48</b>	<b>\$2,781,000</b>	<b>\$3,908,000</b>	<b>\$8,012,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# CBE

## GREATER CUMBERLAND REGIONAL AIRPORT

Greater Cumberland Regional Airport is a general aviation (GA) facility that not only serves the surrounding region in West Virginia, but because of its location, also serves nearby areas of Maryland and Pennsylvania. Greater Cumberland Regional Airport's tri-state service area makes it a unique airport in West Virginia's system. Historically, the airport served as the manufacturing and distribution site for one of America's first tire companies, whose original commercial center is still located on the airfield and has been redeveloped as hangar storage and administration offices for potential tenants. The airport's competitive facility rates and designation as a non-profit 501c (3) organization makes it a highly desirable location to base aircraft according to airport users in the tri-state area and beyond. The airport maintains a commercial-sized box hangar capable of housing several large itinerant and based aircraft.

**City:** Cumberland  
 (CBE is approximately 2 miles south)

**County:** Mineral

**Tourism Region:**  
 Potomac Highlands

**Ownership:** Public

**Primary Runway 05/23:**  
 5,047' x 150'



### AIRPORT ACTIVITIES



Glider/Soaring



Corporate/  
 Business Activity



Search and Rescue/  
 Civil Air Patrol



Career Training/  
 Flight Instruction



Hunting/Fishing

### AIRPORT CLASSIFICATION

Greater Cumberland Regional Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

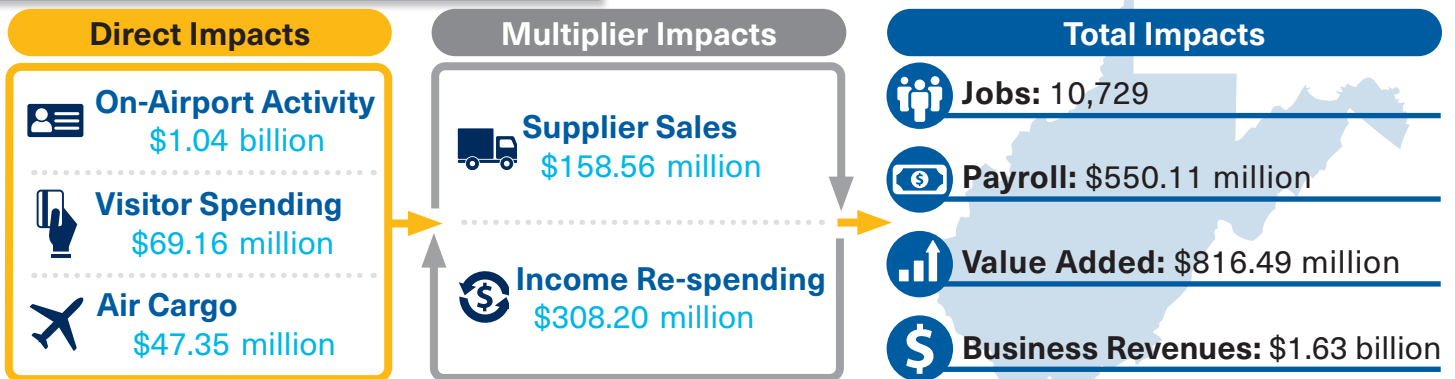
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**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Greater Cumberland Regional Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	56	\$1,981,000	\$2,844,000	\$5,615,000
<b>Visitor Spending</b>	1	\$22,000	\$35,000	\$75,000
<b>Total Direct Impacts</b>	57	\$2,003,000	\$2,880,000	\$5,690,000
<b>Supplier Sales</b>	8	\$383,000	\$643,000	\$1,344,000
<b>Income Re-spending</b>	16	\$592,000	\$886,000	\$1,962,000
<b>Total Multiplier Impacts</b>	24	\$975,000	\$1,530,000	\$3,306,000
<b>Total</b>	<b>81</b>	<b>\$2,978,000</b>	<b>\$4,409,000</b>	<b>\$8,996,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# EKN

## ELKINS-RANDOLPH COUNTY - JENNINGS RANDOLPH FIELD

Elkins-Randolph County - Jennings Randolph Field is a general aviation (GA) facility located near some of West Virginia's most scenic landscape in the middle of the Appalachian Mountains. This area is a prime region for ski resorts and other outdoor activities such as hiking, camping, hunting, fishing, rafting, and kayaking. Elkins is also home to the headquarters of the famous Monongahela National Forest. Centrally located near several state parks, the airport serves as a gateway to a wide range of outdoor activities not found elsewhere in the state. The airport also serves a variety of activities including business aviation, flight instruction, military operations, medical transport, power and gas line aerial inspection and maintenance, and the state's wood technology industry. The Elkins Squadron of the Civil Air Patrol, Elkins Experimental Aircraft Association (EAA) Chapter 1530, and Elkins Pilots Club are also located at the airport.

### AIRPORT ACTIVITIES



**Career Training/  
 Flight Instruction**



**Corporate/  
 Business Activity**



**Skiing**



**Police/Law  
 Enforcement**



**Sightseeing**

**City:** Elkins  
 (EKN is approximately 2 miles south)

**County:** Randolph

**Tourism Region:**  
 Potomac Highlands

**Ownership:** Public

**Primary Runway 05/23:**  
 4,501' x 75'



*Photo courtesy of the Civil Air Patrol*

### AIRPORT CLASSIFICATION

Elkins-Randolph County - Jennings Randolph Field is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts are also generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 GA airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

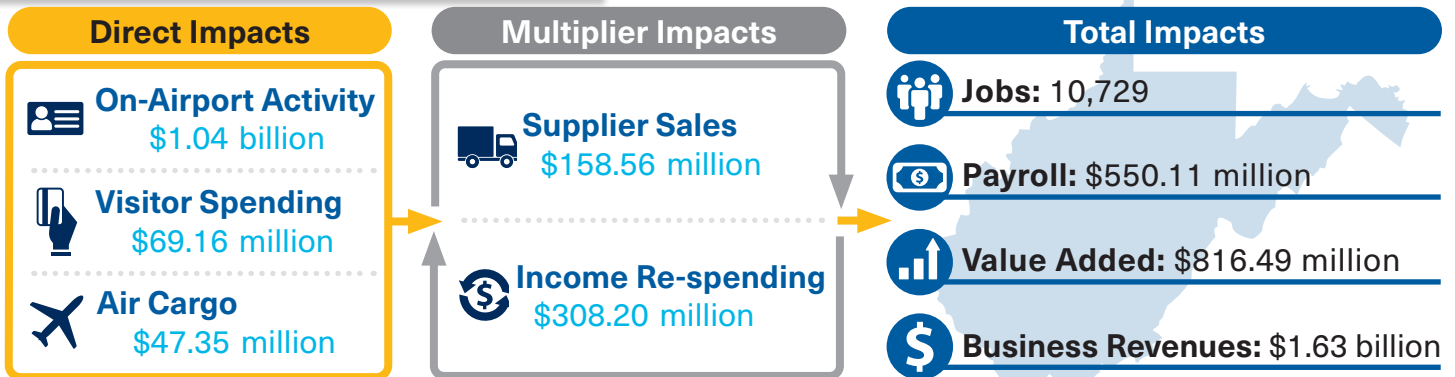
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Elkins-Randolph County - Jennings Randolph Field's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	76	\$3,819,000	\$5,515,000	\$8,837,000
<b>Visitor Spending</b>	3	\$66,000	\$108,000	\$217,000
<b>Total Direct Impacts</b>	79	\$3,884,000	\$5,623,000	\$9,054,000
<b>Supplier Sales</b>	17	\$667,000	\$1,057,000	\$2,293,000
<b>Income Re-spending</b>	27	\$1,010,000	\$1,513,000	\$3,361,000
<b>Total Multiplier Impacts</b>	44	\$1,676,000	\$2,570,000	\$5,654,000
<b>Total</b>	<b>122</b>	<b>\$5,561,000</b>	<b>\$8,192,000</b>	<b>\$14,709,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# 4G7

## FAIRMONT MUNICIPAL - FRANKMAN FIELD

Fairmont Municipal - Frankman Field is a general aviation (GA) airport that services business and recreational users. The airport's close proximity to numerous highway and interstate corridors, nearby accommodations, and restaurants make it an ideal airport for transient visitors. Fairmont Municipal - Frankman Field hosts monthly Experimental Aircraft Association (EAA) Chapter 849 meetings and the Chapter's Young Eagles program which introduces school-aged children to careers in aviation. The airport is also the site of a popular annual event, Aviation Day. On Aviation Day, the airport's gates are opened to the community to generate interest and support of aviation by providing free plane rides, hosting pilots within a 50-mile radius, having the local Civil Air Patrol Squadron participate, and demonstrating medical helicopters.

**City:** Fairmont  
 (4G7 is approximately 2 miles SW)

**County:** Marion

**Tourism Region:**  
 Mountaineer Country

**Ownership:** Public

**Primary Runway 05/23:**  
 2,965' x 75'



### AIRPORT ACTIVITIES



Sightseeing



Military  
 Exercises/Training



Kayaking/Rafting



Police/Law  
 Enforcement



Career Training/  
 Flight Instruction

### AIRPORT CLASSIFICATION

Fairmont Municipal - Frankman Field is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary - Local airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



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## Economic Impact Indicators

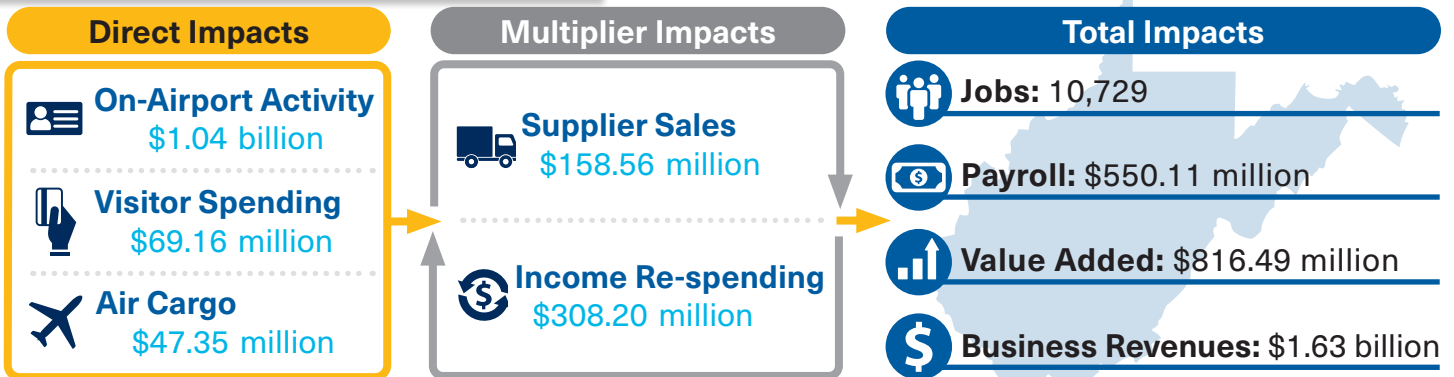
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Fairmont Municipal - Frankman Field's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	7	\$285,000	\$520,000	\$1,635,000
<b>Visitor Spending</b>	2	\$55,000	\$89,000	\$172,000
<b>Total Direct Impacts</b>	9	\$341,000	\$609,000	\$1,807,000
<b>Supplier Sales</b>	2	\$93,000	\$142,000	\$280,000
<b>Income Re-spending</b>	3	\$115,000	\$173,000	\$360,000
<b>Total Multiplier Impacts</b>	5	\$209,000	\$315,000	\$640,000
<b>Total</b>	<b>13</b>	<b>\$549,000</b>	<b>\$924,000</b>	<b>\$2,447,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# 6L4

## LOGAN COUNTY AIRPORT

Given the nickname “the friendliest town in West Virginia,” Logan is home to the Logan County Airport. The airport is a general aviation (GA) facility that serves the surrounding business community, the Air National Guard, and recreational flyers. The Air National Guard is located off-airport nearby, and uses the airport for a number of trainings including dark operations. The airport has developed a strong relationship with the nearby community and hosts an annual Veteran Reunion Fly-In. Members of the community and veterans travel from all over the region for the event, particularly to see the UH-1B “Huey” Helicopter, nicknamed “Miss Fit,” that served in the Vietnam War. The veteran helicopter is owned by Marpat Aviation, a Federal Aviation Administration (FAA)-certified Part 145 Repair Station located at the airport, and is on display for airport visitors.

**City:** Logan  
 (6L4 is approximately 4 miles east)

**County:** Logan

**Tourism Region:**  
 Hatfield McCoy Mountains

**Ownership:** Public

**Primary Runway 06/24:**  
 3,605' x 75'



### AIRPORT ACTIVITIES



**Corporate/Business Activity**



**Medical Transport/Evacuation**



**Aircraft Flight Testing**



**Career Training/Flight Instruction**



**Aerial Inspections**

### AIRPORT CLASSIFICATION

Logan County Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the FAA as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).





# AVIATION'S ECONOMIC IMPACT

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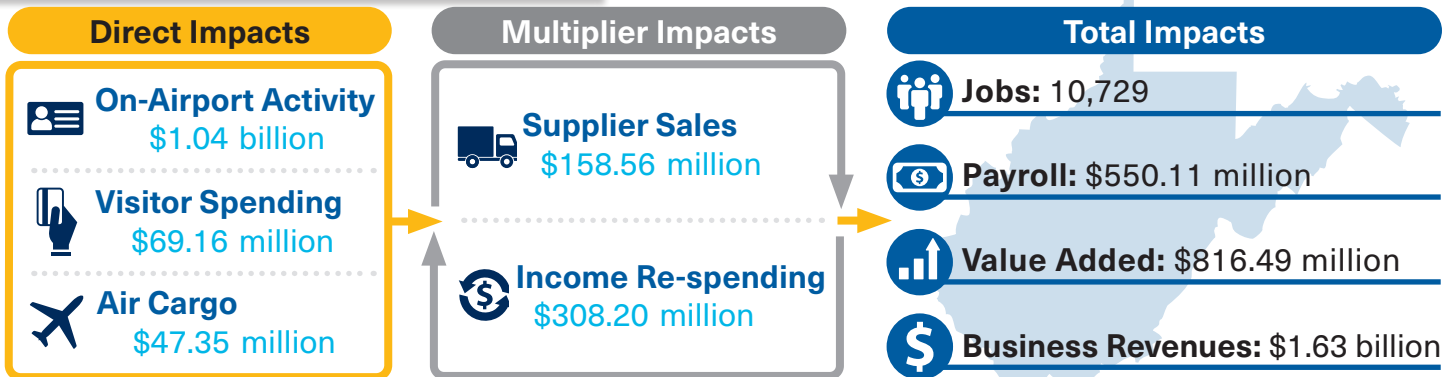
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Logan County Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	20	\$851,000	\$1,240,000	\$2,397,000
<b>Visitor Spending</b>	1	\$12,000	\$19,000	\$41,000
<b>Total Direct Impacts</b>	21	\$863,000	\$1,260,000	\$2,438,000
<b>Supplier Sales</b>	4	\$173,000	\$289,000	\$582,000
<b>Income Re-spending</b>	5	\$194,000	\$290,000	\$630,000
<b>Total Multiplier Impacts</b>	9	\$368,000	\$579,000	\$1,212,000
<b>Total</b>	<b>29</b>	<b>\$1,231,000</b>	<b>\$1,839,000</b>	<b>\$3,650,000</b>

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# MRB

## EASTERN WEST VIRGINIA REGIONAL/SHEPHERD FIELD

Eastern West Virginia Regional/Shepherd Field (MRB) serves fast-growing and relatively affluent communities in the Eastern Panhandle and in nearby Virginia, Maryland, and Pennsylvania. MRB is West Virginia’s general aviation (GA) leader, being home to more based aircraft than any other airport. The facility offers a fixed-base operation (FBO) and in-house, Federal Aviation Administration (FAA)-certified Part 135 charter service using the “MRB Aviation” trade name. Possessing the longest, widest, and strongest runway in the state and designed for regular use by some of the world’s largest aircraft, MRB frequently receives training visits by all branches of the military, including Presidential VIP transport. The West Virginia Air National Guard’s 167<sup>th</sup> Airlift Wing at MRB maintains the state’s largest airbase and conducts global strategic airlift operations. Martinsburg’s desirable location attracts major investment by federal government agencies, along with data centers, distribution warehouses, and manufacturing plants. With proximity to numerous interstate corridors and intermodal transfer facilities, MRB offers more than 160 acres of developable land within the state’s only on-airport Foreign Trade Zone. MRB is also home to two flight training companies, including an FAA Part 141-certified flight training school. Despite the pandemic, 2020 saw the Airport Authority welcome four new businesses and significant increases in aircraft takeoffs and landings, flight school training hours, fuel gallons sold, and charter trips booked.

### AIRPORT ACTIVITIES



**Military Exercises/Training**



**Corporate/Business Activity**



**Career Training/Flight Instruction**



**Medical Transport/Evacuation**



**Location of Community Facilities**

**City:** Martinsburg  
 (MRB is approximately 4 miles south)

**County:** Berkeley

**Tourism Region:**  
 Eastern Panhandle

**Ownership:** Public

**Primary Runway 08/26:**  
 8,815' x 150'



Photo courtesy of the Civil Air Patrol

### AIRPORT CLASSIFICATION

Eastern West Virginia Regional/Shepherd Field is one of 17 GA facilities in West Virginia’s aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is categorized by the Federal Aviation Administration (FAA) as a Reliever airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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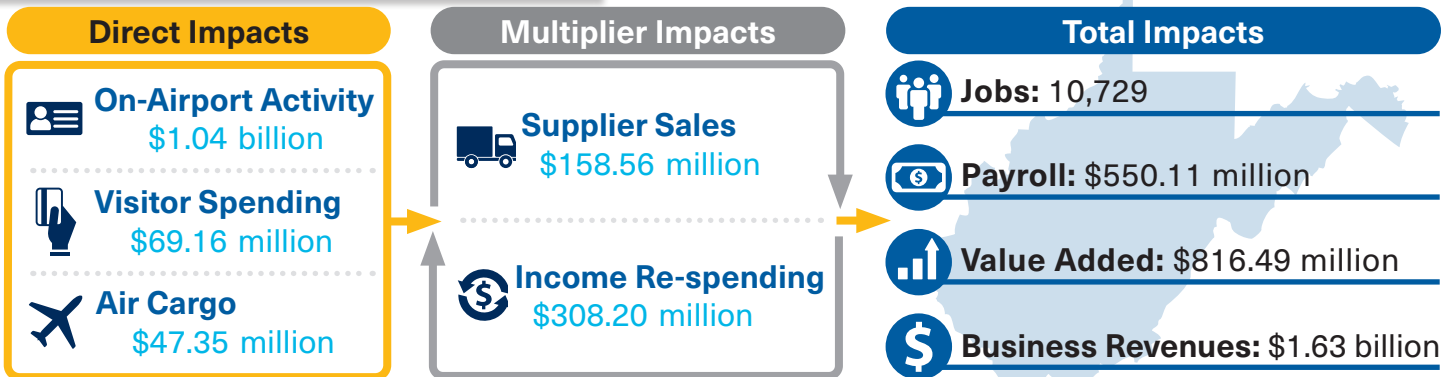
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Eastern West Virginia Regional/Shepherd Field's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	1,688	\$72,125,000	\$82,345,000	\$94,495,000
<b>Visitor Spending</b>	9	\$236,000	\$378,000	\$706,000
<b>Total Direct Impacts</b>	1,697	\$72,362,000	\$82,723,000	\$95,201,000
<b>Supplier Sales</b>	53	\$2,432,000	\$3,877,000	\$7,982,000
<b>Income Re-spending</b>	392	\$15,830,000	\$23,611,000	\$50,626,000
<b>Total Multiplier Impacts</b>	445	\$18,262,000	\$27,488,000	\$58,608,000
<b>Total</b>	<b>2,142</b>	<b>\$90,623,000</b>	<b>\$110,211,000</b>	<b>\$153,809,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# MPG

## MARSHALL COUNTY AIRPORT

Marshall County Airport is a general aviation (GA) facility located in the northern panhandle of the state. As an “uncontrolled” airfield (meaning its airspace is less restrictive), simple radio or visual communication is all that is needed to take off or land. This makes Marshall County Airport an ideal location for helicopter operations and recreational aircraft operations. Because of the advantages its location offers, West Virginia’s largest medical helicopter service established a base in 2018 that houses a helicopter and flight crew 24/7 to serve the surrounding communities. In recent years, the airport has proven an invaluable asset as a helicopter staging area for contractors in oil and gas development. Whatever the activity, the airport remains a reflection of the hospitable and hardworking nature of the citizens of Marshall County, providing a safe and inviting facility for the everyday flyer.

**City:** Moundsville  
 (MPG is approximately 3 miles south)

**County:** Marshall

**Tourism Region:**  
 Northern Panhandle

**Ownership:** Public

**Primary Runway 06/24:** 3,301’ x 60’



### AIRPORT ACTIVITIES



**Military Exercises/Training**



**Aerial Inspections**



**Aircraft Flight Testing**



**Aerial Photography/Surveying**



**Medical Transport/Evacuation**

### AIRPORT CLASSIFICATION

Marshall County Airport is one of 17 GA facilities in West Virginia’s aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Local airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



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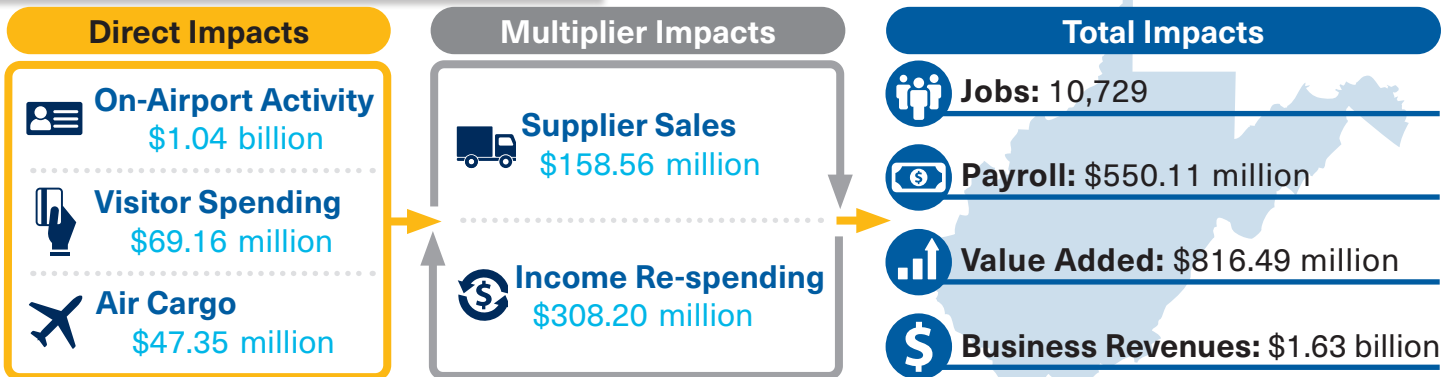
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Marshall County Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	29	\$2,269,000	\$2,697,000	\$4,531,000
<b>Visitor Spending</b>	1	\$21,000	\$32,000	\$65,000
<b>Total Direct Impacts</b>	30	\$2,290,000	\$2,729,000	\$4,595,000
<b>Supplier Sales</b>	7	\$412,000	\$650,000	\$1,259,000
<b>Income Re-spending</b>	14	\$577,000	\$847,000	\$1,791,000
<b>Total Multiplier Impacts</b>	21	\$988,000	\$1,497,000	\$3,049,000
<b>Total</b>	<b>51</b>	<b>\$3,279,000</b>	<b>\$4,226,000</b>	<b>\$7,645,000</b>

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# W99

## GRANT COUNTY AIRPORT

Grant County Airport is a general aviation (GA) facility located near the south branch of the Potomac River. The airport's location being adjacent to Cave Mountain provides optimal "lift" conditions that make it conducive to serve as one of the few glider flying and training operations in the state. Grant County Airport maintains the "Fly and Tie" camping site, where private planes can park on the field and use the airport-maintained campgrounds that include restroom and shower amenities. The airport also serves as the site for periodic military training operations specializing in nighttime operations. The surrounding region is known for a healthy forestry and lumber industry that the airport supports, including Allegheny Wood Products, a global leader of the hardwood industry using Appalachian hardwood species to produce their products.

**City:** Petersburg  
 (W99 is approximately 1 mile southwest)

**County:** Grant

**Tourism Region:**  
 Potomac Highlands

**Ownership:** Public

**Primary Runway 13/31:**  
 5,000' x 75'



### AIRPORT ACTIVITIES



Glider/Soaring



Search and Rescue/  
 Civil Air Patrol



Location of  
 Community Facilities



Aircraft Flight  
 Testing



Military  
 Exercises/Training

### AIRPORT CLASSIFICATION

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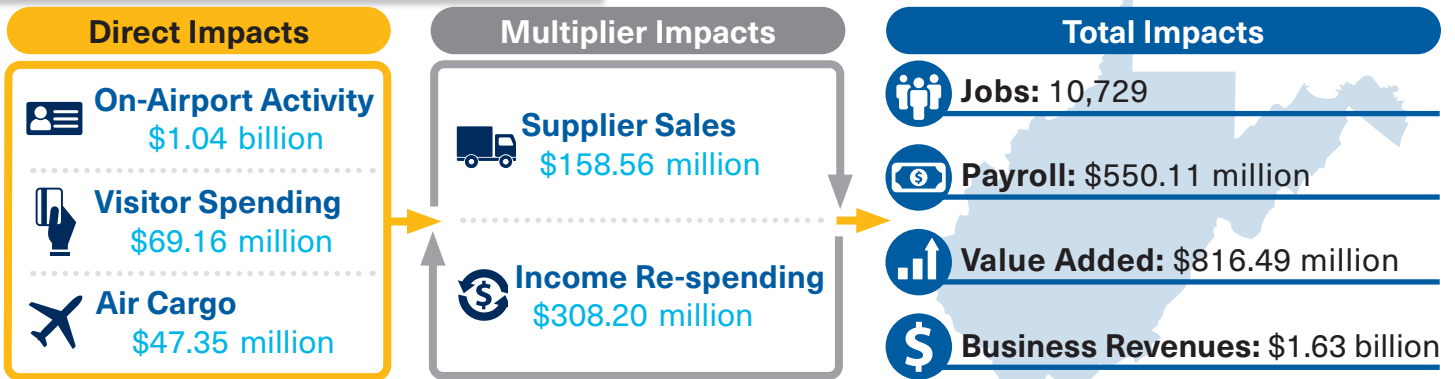
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Grant County Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
On-Airport Activity	6	\$120,000	\$170,000	\$429,000
Visitor Spending	7	\$146,000	\$240,000	\$483,000
<b>Total Direct Impacts</b>	<b>13</b>	<b>\$267,000</b>	<b>\$410,000</b>	<b>\$912,000</b>
Supplier Sales	2	\$81,000	\$126,000	\$264,000
Income Re-spending	2	\$87,000	\$131,000	\$290,000
<b>Total Multiplier Impacts</b>	<b>4</b>	<b>\$168,000</b>	<b>\$257,000</b>	<b>\$554,000</b>
<b>Total</b>	<b>17</b>	<b>\$435,000</b>	<b>\$667,000</b>	<b>\$1,466,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# 79D

## PHILIPPI/BARBOUR COUNTY REGIONAL AIRPORT

Philippi/Barbour County Regional Airport is a general aviation (GA) facility situated atop a hill overlooking the Tygart Valley River. Rotor Blade, a company based in South Carolina, is a tenant of the airport and uses helicopters with large saw blade attachments to conduct aerial tree trimming, tree topping, and other vegetation management for the region. During the summer months, the airport is frequently used as a base of operations by law enforcement organizations, the local Civil Air Patrol Squadron, wildlife management agencies, and natural resource management representatives. Philippi/Barbour County Regional Airport's busiest months for GA activity take place during the regular sports season at Alderson Broaddus University where alumni, parents, and other supporters attend sporting events at the campus located approximately two miles away.

**City:** Philippi  
 (79D is approximately 2 miles NW)

**County:** Barbour

**Tourism Region:**  
 Mountaineer Country

**Ownership:** Public

**Primary Runway 08/26:**  
 3,275' x 60'



### AIRPORT ACTIVITIES



**Corporate/Business Activity**



**Aerial Inspections**



**Search and Rescue/  
 Civil Air Patrol**



**Environmental Patrol**



**Medical Transport/  
 Evacuation**

### AIRPORT CLASSIFICATION

Philippi/Barbour County Regional Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).





# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts are also generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 GA airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

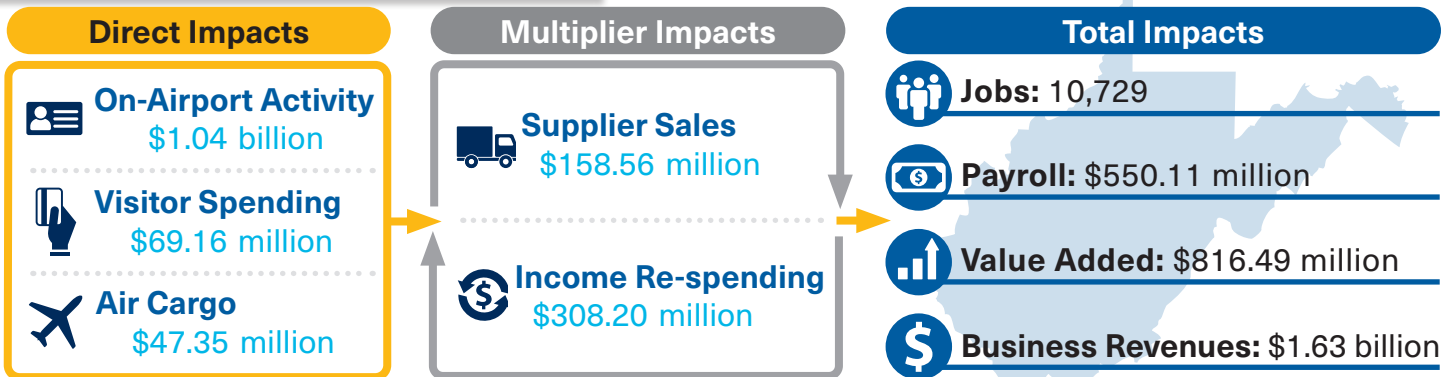
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Philippi/Barbour County Regional Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	6	\$270,000	\$329,000	\$432,000
<b>Visitor Spending</b>	-	\$3,000	\$5,000	\$10,000
<b>Total Direct Impacts</b>	6	\$273,000	\$334,000	\$442,000
<b>Supplier Sales</b>	1	\$28,000	\$49,000	\$96,000
<b>Income Re-spending</b>	3	\$106,000	\$159,000	\$338,000
<b>Total Multiplier Impacts</b>	4	\$134,000	\$208,000	\$434,000
<b>Total</b>	<b>9</b>	<b>\$408,000</b>	<b>\$542,000</b>	<b>\$876,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but also includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# I16

## KEE FIELD

Kee Field is located in Pineville and is a general aviation (GA) facility serving the surrounding region and community. The airport is well maintained and favored by pilots who know that when they fly into Kee Field, they will always be met with a smile and made to feel welcome. The airport has even been known to provide an impromptu taxi service with their own personal vehicle if they know a visitor needs a ride into town or nearby. The airport sees a healthy amount of interstate traffic for its size due to its friendly service and low rates.

**City:** Pineville  
 (I16 is approximately 2 miles NW)

**County:** Wyoming

**Tourism Region:**  
 New River-Greenbrier Valley

**Ownership:** Public

**Primary Runway 08/26:**  
 3,701' x 60'



Photo courtesy of the Civil Air Patrol

### AIRPORT ACTIVITIES



Corporate/Business Activity



Hunting/Fishing



Sightseeing



Aerial Inspections



Police/Law Enforcement

### AIRPORT CLASSIFICATION

Kee Field is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Unclassified airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AIES) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

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## Economic Impact Indicators

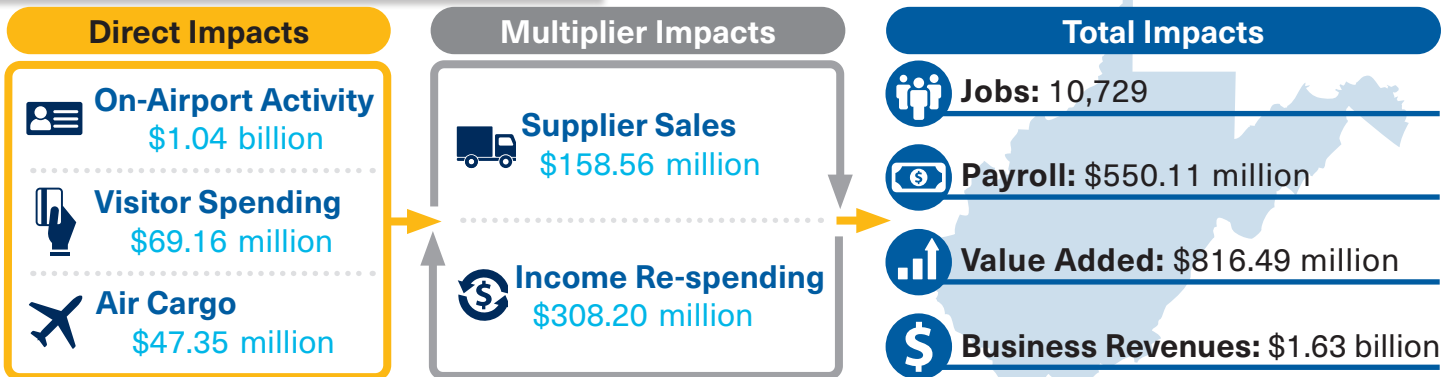
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**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Keefield's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	1	\$43,000	\$53,000	\$75,000
<b>Visitor Spending</b>	-	\$2,000	\$3,000	\$5,000
<b>Total Direct Impacts</b>	1	\$44,000	\$55,000	\$80,000
<b>Supplier Sales</b>	-	\$11,000	\$16,000	\$31,000
<b>Income Re-spending</b>	-	\$9,000	\$14,000	\$29,000
<b>Total Multiplier Impacts</b>	-	\$20,000	\$29,000	\$60,000
<b>Total</b>	<b>2</b>	<b>\$64,000</b>	<b>\$85,000</b>	<b>\$141,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but also includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Sources: WV AEIS Airport Manager Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# 312

## MASON COUNTY AIRPORT

Mason County Airport is a general aviation (GA) facility located near the Ohio border. The airport's fixed-base operator (FBO) is operated by a mother-and-son duo who are dedicated to maintaining the airport and serving the GA community. Recreational flyers use the airport most frequently, but it also occasionally supports business activity in the region. Memories from victorious "first flights" dating back to the 1970s are displayed on the walls of the pilot lounge using pictures and handwritten notes from new pilots. Decades later, memories are still being made at the airport, with free airplane rides offered on Mother's Day and other community events, bringing people to the airport. The airport has a lot of history and continues to contribute to the community.

**City:** Point Pleasant  
 (312 is approximately 4 miles NE)

**County:** Mason

**Tourism Region:** Metro Valley

**Ownership:** Public

**Primary Runway 07/25:**  
 4,000' x 75'



### AIRPORT ACTIVITIES



Kayaking/Rafting



Corporate/Business Activity



Medical Transport/  
 Evacuation



Aerial Photography/  
 Surveying



Career Training/  
 Flight Instruction

### AIRPORT CLASSIFICATION

Mason County Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

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## Economic Impact Indicators

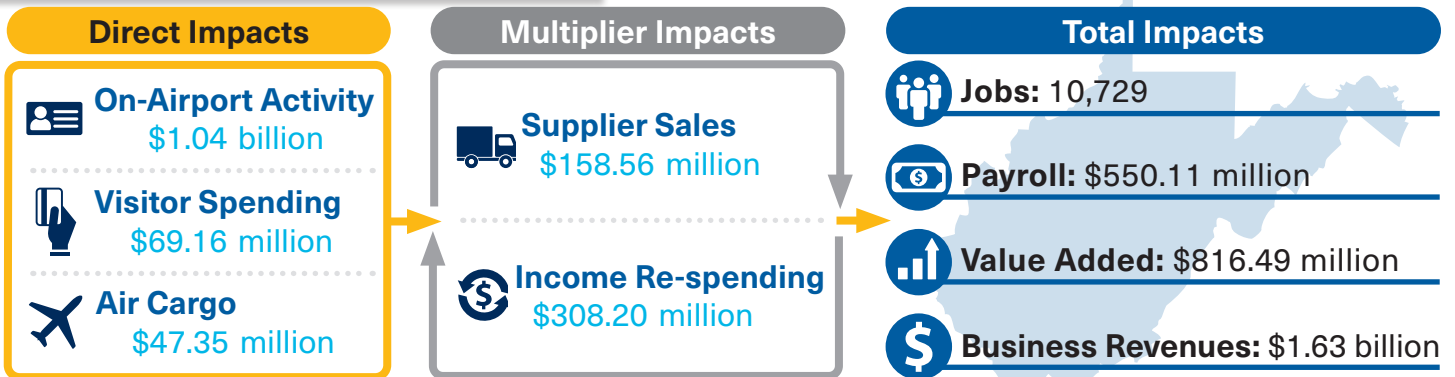
**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Mason County Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	4	\$191,000	\$288,000	\$451,000
<b>Visitor Spending</b>	-	\$2,000	\$2,000	\$5,000
<b>Total Direct Impacts</b>	4	\$192,000	\$291,000	\$456,000
<b>Supplier Sales</b>	1	\$31,000	\$53,000	\$101,000
<b>Income Re-spending</b>	1	\$51,000	\$76,000	\$154,000
<b>Total Multiplier Impacts</b>	2	\$82,000	\$129,000	\$255,000
<b>Total</b>	<b>6</b>	<b>\$274,000</b>	<b>\$420,000</b>	<b>\$711,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but also includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Sources: WV AEIS Airport Manager Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# I18

## JACKSON COUNTY AIRPORT

Jackson County Airport, known as “the Friendly Airport,” is located near the northwest border of West Virginia, near the Ohio River. The airport supports business and general aviation (GA) activity and has flight training and maintenance facilities on the field. The airport offers full-service and self-service fueling options. Business aircrafts use the airport to access the nearby industrial park and other businesses in the region. Jackson County Airport promotes strong community relations by being innovative when hosting community events and will often have local flight instructors provide recreational rides to the public.

**City:** Ravenswood  
 (I18 is approximately 6 miles SW)

**County:** Jackson

**Tourism Region:**  
 Mid-Ohio Valley

**Ownership:** Public

**Primary Runway 04/22:**  
 4,000' x 75'



### AIRPORT ACTIVITIES



Medical Transport/  
 Evacuation



Corporate/Business  
 Activity



Military  
 Exercises/Training



Location of  
 Community Facilities



Career Training/  
 Flight Instruction

### AIRPORT CLASSIFICATION

Jackson County Airport is one of 17 GA facilities in West Virginia’s aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Local airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

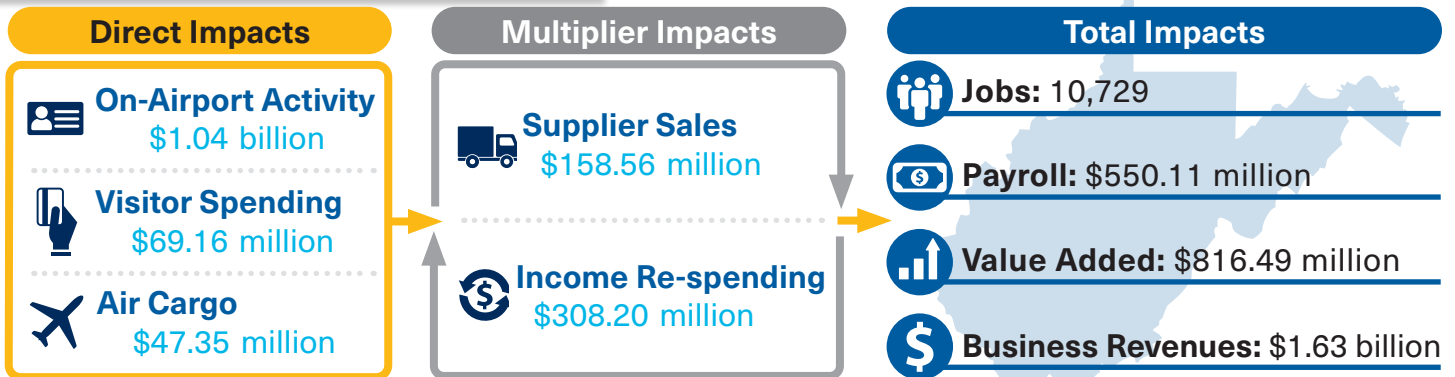
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**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Jackson County Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	26	\$1,839,000	\$2,197,000	\$4,207,000
<b>Visitor Spending</b>	5	\$122,000	\$202,000	\$404,000
<b>Total Direct Impacts</b>	31	\$1,961,000	\$2,399,000	\$4,612,000
<b>Supplier Sales</b>	8	\$390,000	\$645,000	\$1,289,000
<b>Income Re-spending</b>	14	\$545,000	\$814,000	\$1,757,000
<b>Total Multiplier Impacts</b>	22	\$935,000	\$1,459,000	\$3,046,000
<b>Total</b>	<b>53</b>	<b>\$2,896,000</b>	<b>\$3,857,000</b>	<b>\$7,658,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# SXL

## SUMMERSVILLE AIRPORT

Summersville Airport is a general aviation (GA) facility that provides a gateway to some of the more popular outdoor recreational opportunities in the state, particularly for summer recreation along the Gauley River and Summersville Lake. The river is known for its rapids and attracts kayakers from all over the region. The airport recently started offering AvGas and the Airport Board continues to work hard to advance the airport and bring in community support.

**City:** Summersville  
 (SXL is approximately 3 miles south)

**County:** Nicholas

**Tourism Region:**  
 Mountain Lakes

**Ownership:** Public

**Primary Runway 05/22:**  
 3,015' x 50'



### AIRPORT ACTIVITIES



Sightseeing



Kayaking/Rafting



Hunting/Fishing



Mountaineering



Corporate/Business  
 Activity

### AIRPORT CLASSIFICATION

Summersville Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).





# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

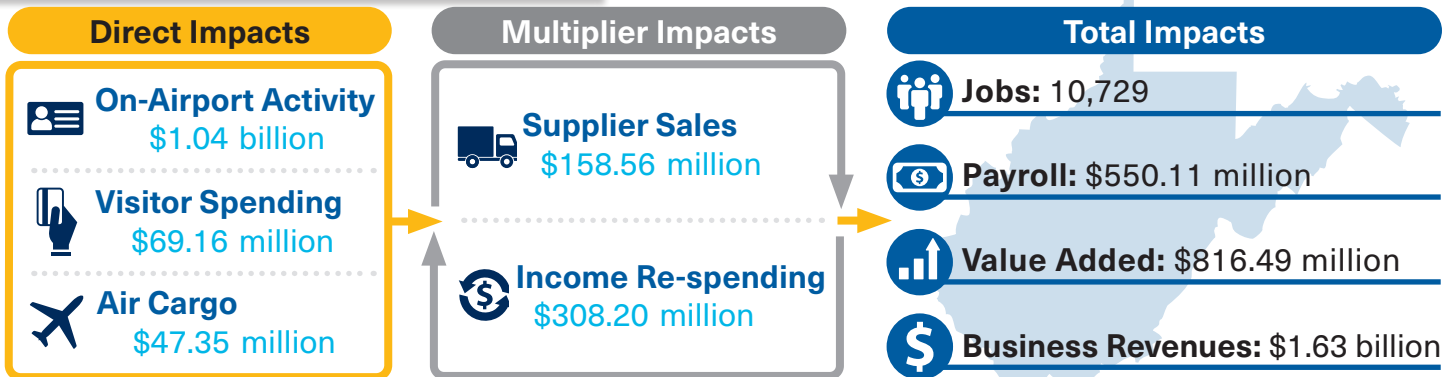
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**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Summersville Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	-	-	\$8,000	\$20,000
<b>Visitor Spending</b>	-	\$1,000	\$2,000	\$4,000
<b>Total Direct Impacts</b>	-	\$1,000	\$10,000	\$24,000
<b>Supplier Sales</b>	-	\$3,000	\$5,000	\$10,000
<b>Income Re-spending</b>	-	\$3,000	\$4,000	\$9,000
<b>Total Multiplier Impacts</b>	-	\$6,000	\$9,000	\$19,000
<b>Total</b>	-	<b>\$7,000</b>	<b>\$19,000</b>	<b>\$43,000</b>

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# 481

## BRAXTON COUNTY AIRPORT

Braxton County Airport is a general aviation (GA) facility that serves business and recreational users. The airport sees a high percentage of transient or interstate operations due to its unique geographic location of being in the center of the state, and is less than a two-hour drive to several bordering state lines. Because of its central location, the town of Sutton hosts a number of corporate trainings and events throughout the year, which bring considerable traffic through the airport. The airport is growing to meet this corporate demand by expanding hangar space for current based aircraft tenants and expanding the facilities for transient aircraft. The airport has also hosted film crews in the past who were filming aerial footage of the area for a documentary that premiered on Netflix.

**City:** Sutton  
 (481 is approximately 3 miles east)

**County:** Braxton

**Tourism Region:**  
 Mountain Lakes

**Ownership:** Public

**Primary Runway 02/20:**  
 3,995' x 60'



### AIRPORT ACTIVITIES



Sightseeing



Corporate/  
 Business Activity



Aerial Inspections



Aerial Photography/  
 Surveying



Location of  
 Community Facilities

### AIRPORT CLASSIFICATION

Braxton County Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

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## Economic Impact Indicators

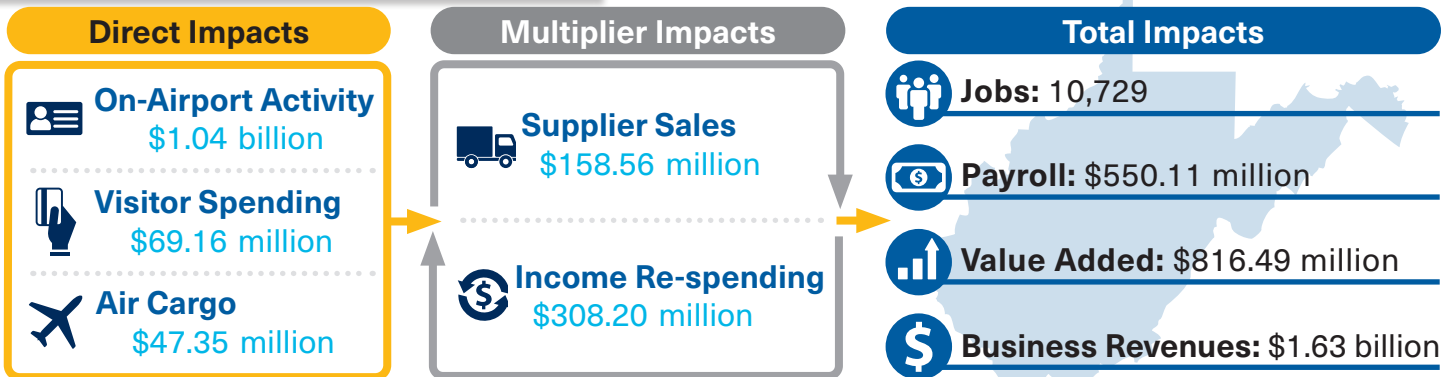
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**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Braxton County Airport's Economic Impacts

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	3	\$19,000	\$24,000	\$118,000
<b>Visitor Spending</b>	-	\$8,000	\$12,000	\$26,000
<b>Total Direct Impacts</b>	3	\$27,000	\$36,000	\$144,000
<b>Supplier Sales</b>	-	\$18,000	\$27,000	\$57,000
<b>Income Re-spending</b>	-	\$16,000	\$24,000	\$52,000
<b>Total Multiplier Impacts</b>	-	\$34,000	\$51,000	\$109,000
<b>Total</b>	<b>4</b>	<b>\$61,000</b>	<b>\$87,000</b>	<b>\$253,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but also includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Sources: WV AEIS Airport Manager Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# HLG

## WHEELING OHIO COUNTY AIRPORT

Wheeling Ohio County Airport is a general aviation (GA) facility located in proximity to the Ohio River, which separates Ohio and West Virginia and the Pennsylvania/West Virginia state line. The airport's location allows it to serve communities from all three states. The airport is praised for its local aviation history museum which highlights the region's contributions during World War II, the days in which the airport provided commercial service flights, and the famous political figures who have visited in the past. The presence of an air traffic control tower is ideal for student pilots from aviation programs at Ohio University to train within controlled airspace. Wheeling Ohio County Airport serves as a reliever for medical evacuation operations due to its proximity to Wheeling Hospital and frequently accommodates corporate and business activity in the area.

**City:** Wheeling  
 (HLG is approximately 8 miles NE)

**County:** Ohio

**Tourism Region:**  
 Northern Panhandle

**Ownership:** Public

**Primary Runway 03/21:**  
 5,002' x 150'



### AIRPORT ACTIVITIES



**Corporate/Business  
 Activity**



**Military  
 Exercises/Training**



**Search and Rescue/  
 Civil Air Patrol**



**Location of  
 Community Facilities**



**Career Training/  
 Flight Instruction**

### AIRPORT CLASSIFICATION

Wheeling Ohio County Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Regional airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

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This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

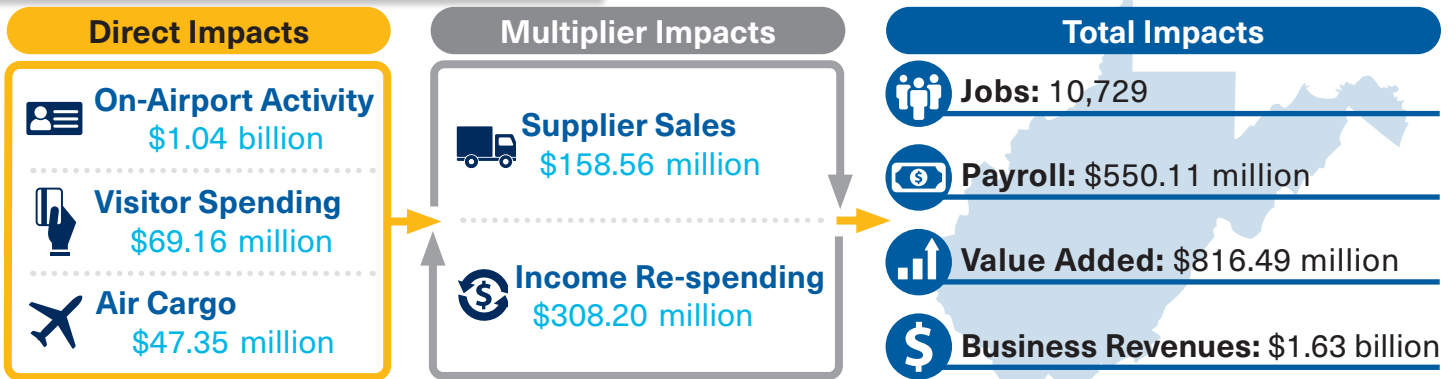
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**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Wheeling Ohio County Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	42	\$1,609,000	\$2,186,000	\$4,270,000
<b>Visitor Spending</b>	10	\$267,000	\$428,000	\$814,000
<b>Total Direct Impacts</b>	52	\$1,876,000	\$2,613,000	\$5,084,000
<b>Supplier Sales</b>	8	\$447,000	\$700,000	\$1,349,000
<b>Income Re-spending</b>	14	\$591,000	\$869,000	\$1,841,000
<b>Total Multiplier Impacts</b>	22	\$1,038,000	\$1,569,000	\$3,189,000
<b>Total</b>	<b>74</b>	<b>\$2,914,000</b>	<b>\$4,183,000</b>	<b>\$8,273,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# EBD

## APPALACHIAN REGIONAL AIRPORT

Appalachian Regional Airport is a relatively new airport in the West Virginia aviation system, located in Williamson. The airport is surrounded by mountainous landscape and services the general aviation (GA) community of the region. Due to the airport's fairly remote location and minimal ambient light from the surrounding area, it is often used for nighttime training operations. The airport's lengthy runway and physical location make it an attractive airport for student pilots, particularly those practicing nighttime flight operations. The airport has an active flying club that volunteers time to assist with airport maintenance and operations. The airport recently started providing Jet A fuel sales in 2020 and plans to continue improving and expanding its ability to serve the aviation community. The airport's next planned improvement is constructing a pilot and flight planning area so pilots can have a comfortable place to rest and plan their next flight while at the airport.



**City:** Williamson  
 (EBD is approximately 8 miles east)

**County:** Mingo

**Tourism Region:**  
 Hatfield McCoy Mountains

**Ownership:** Public

**Primary Runway 08/26:**  
 5,001' x 75'

### AIRPORT ACTIVITIES



**Corporate/Business  
 Activity**



**Aerial Inspections**



**Military  
 Exercises/Training**



**Aircraft Flight  
 Testing**



**Aerial Photography/  
 Surveying**

### AIRPORT CLASSIFICATION

Appalachian Regional Airport is one of 17 GA facilities in West Virginia's aviation system. GA airports serve as integral gateways to communities across the state and accommodate activities such as emergency medical operations, business and recreational operations, mail and cargo transportation, remote access, and many more. The airport is classified by the Federal Aviation Administration (FAA) as a Nonprimary – Basic airport and is eligible for federal aviation funding through the Airport Improvement Program (AIP).



# AVIATION'S ECONOMIC IMPACT

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. This generates quantitative economic value in the form of jobs, payroll, value added, and business revenues, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries of freight, aerial firefighting, aviation career opportunities, and much more.

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This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending). In addition, direct impacts for on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Economic Impact Indicators

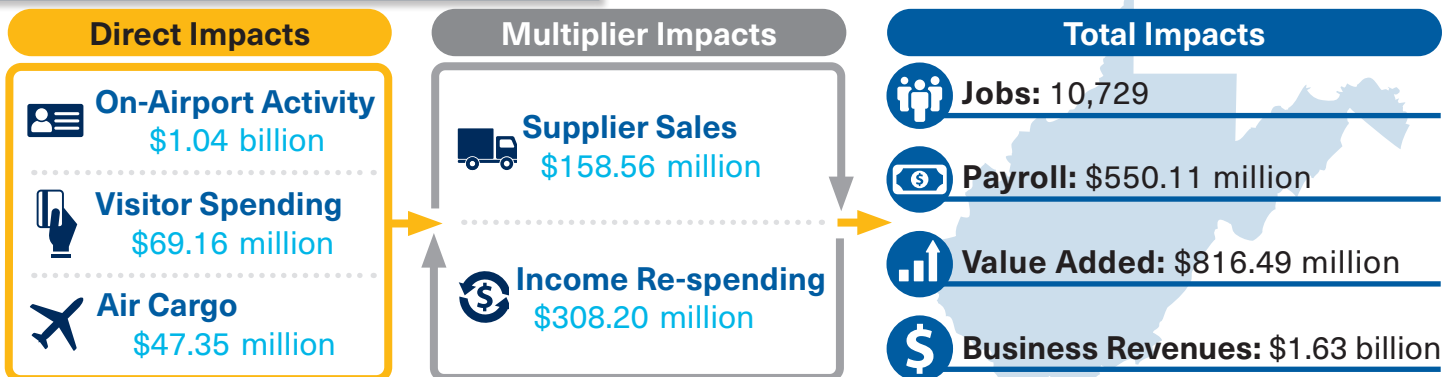
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**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Appalachian Regional Airport's Economic Impacts

	<b>Jobs</b>	<b>Payroll</b>	<b>Value Added</b>	<b>Business Revenues</b>
<b>On-Airport Activity</b>	1	\$10,000	\$11,000	\$84,000
<b>Visitor Spending</b>	-	\$3,000	\$4,000	\$9,000
<b>Total Direct Impacts</b>	1	\$12,000	\$15,000	\$93,000
<b>Supplier Sales</b>	-	\$14,000	\$20,000	\$40,000
<b>Income Re-spending</b>	-	\$11,000	\$16,000	\$35,000
<b>Total Multiplier Impacts</b>	-	\$25,000	\$36,000	\$75,000
<b>Total</b>	<b>2</b>	<b>\$37,000</b>	<b>\$52,000</b>	<b>\$168,000</b>

Notes: Totals may not add due to rounding. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but also includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. Sources: WV AEIS Airport Manager Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

## APPENDIX E. ELECTED OFFICIALS PRIMERS

Appendix E features 16 two-page primers that represent the Senate Districts of West Virginia and the economic impact of the airports within those district boundaries. The primers include an overview of the study and the total systemwide economic impact. Additionally, the individual impacts of the airports within each respective district are also included. **Table 1** lists the order in which the Elected Officials Primers are presented in this appendix and includes the airports within each district for reference.

**Table 1: Order of Elected Officials Primers and the Airports within Each District**

Senate District	Associated City	Airport Name	FAA ID
1	Wheeling	Wheeling Ohio County	HLG
2	Moundsville	Marshall County	MPG
3	Parkersburg	Mid-Ohio Valley Regional	PKB
4	Point Pleasant	Mason County	3I2
	Ravenswood	Jackson County	I18
5	Huntington	Tri-State/Milton J. Ferguson Field	HTS
6	Bluefield	Mercer County	BLF
	Williamson	Appalachian Regional	EBD
7	Logan	Logan County	6L4
8/17	Charleston	Yeager	CRW
9	Beckley	Raleigh County Memorial	BKW
	Pineville	Kee Field	I16
10	Lewisburg	Greenbrier Valley	LWB
11	Buckhannon	Upshur County Regional	W22
	Elkins	Elkins-Randolph County - Jennings Randolph Field	EKN
	Petersburg	Grant County	W99
	Summersville	Summersville	SXL
12	Clarksburg	North Central West Virginia	CKB
	Sutton	Braxton County	48I
13	Fairmont	Fairmont Municipal - Frankman Field	4G7
	Morgantown	Morgantown Municipal - Walter L. Bill Hart Field	MGW
14	Philippi	Philippi/Barbour County Regional	79D
15	Cumberland	Greater Cumberland Regional	CBE
	Martinsburg	Eastern West Virginia Regional/Shepherd Field	MRB
16	Martinsburg	Eastern West Virginia Regional/Shepherd Field	MRB



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# Senate District 1

Wheeling Ohio County

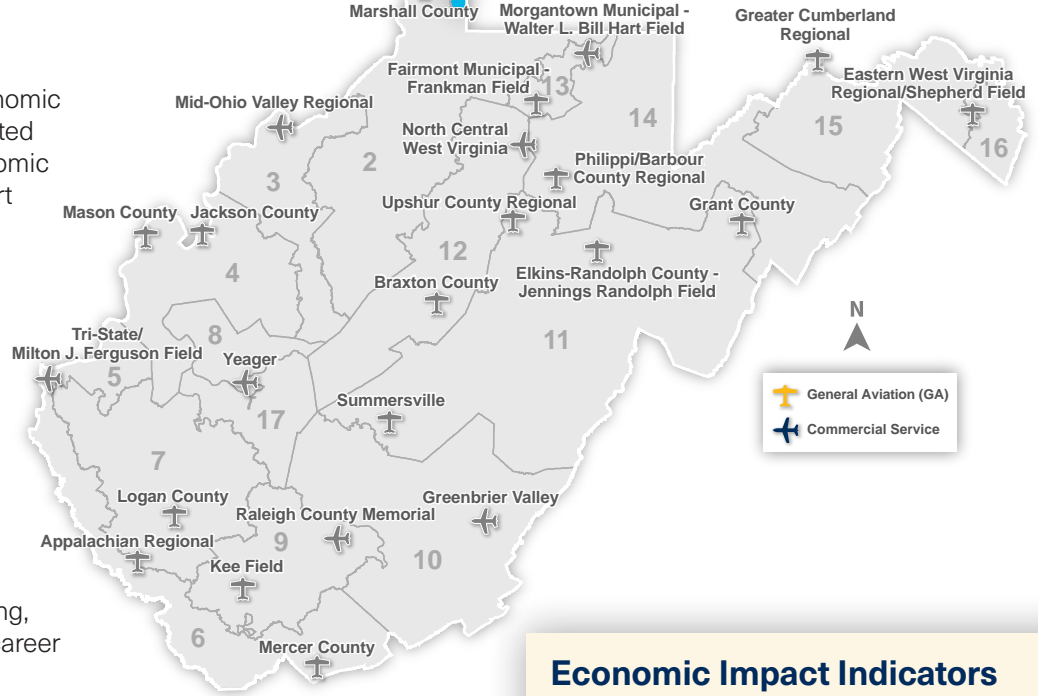
## STUDY OVERVIEW

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Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 1

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 1 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Wheeling Ohio County Airport (HLG)** is a GA airport located in Wheeling with a 5,002' runway. Due to its location, the airport serves surrounding communities in West Virginia, Ohio, and Pennsylvania. The airport has a rich history that lives on at the local aviation history museum, highlighting the airports contribution during World War II, previously serving as a commercial service airport, and hosting famous political figures. The presence of an air traffic control tower makes it an ideal airport for student pilots from nearby aviation programs to train in controlled airspace. The airport serves as a reliever for medical operations due to its proximity to Wheeling Hospital and supports a variety of other activities, including:

- ▲ Military Exercises/Training
- ▲ Corporate Business Activity
- ▲ Search & Rescue/Civil Air Patrol

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 1 supports over 70 jobs, generating almost \$3 million in payroll each year. Additionally, the airport supports approximately \$4 million in value added and over \$8 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	42	\$1,609,000	\$2,186,000	\$4,270,000
<b>Visitor Spending</b>	10	\$267,000	\$428,000	\$814,000
<b>Total Direct Impacts</b>	52	\$1,876,000	\$2,613,000	\$5,084,000
<b>Supplier Sales</b>	8	\$447,000	\$700,000	\$1,349,000
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<b>Total Multiplier Impacts</b>	22	\$1,038,000	\$1,569,000	\$3,189,000
<b>Total</b>	<b>74</b>	<b>\$2,914,000</b>	<b>\$4,183,000</b>	<b>\$8,273,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 2

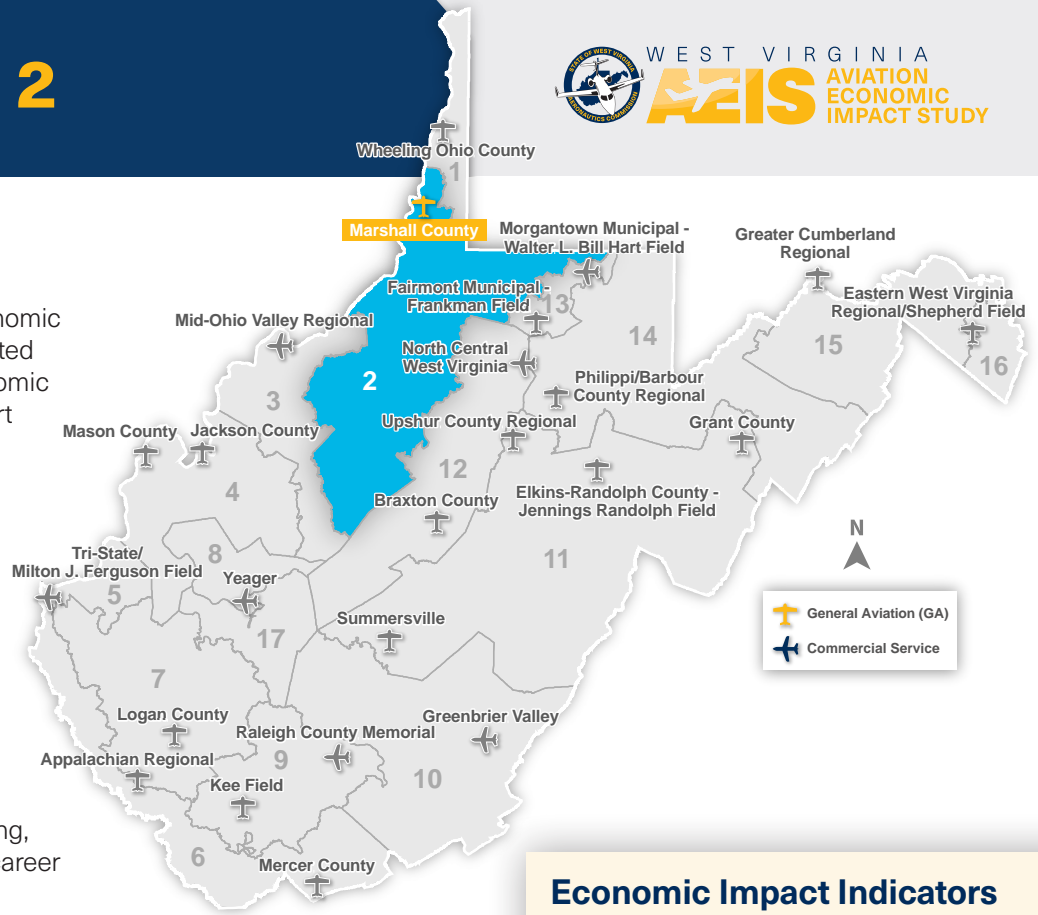
## STUDY OVERVIEW

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## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 2

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 2 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Marshall County Airport (MPG)** is a GA airport located in Moundsville and has a 3,301' runway. The airport is an "uncontrolled" airfield, meaning its airspace is less restrictive and attracts a diverse fleet of recreational aircraft and helicopters. The airport also supports emergency medical operations with West Virginia's largest medical helicopter service establishing one of their eight total bases across the state at MPG. In recent years, the airport has proven an invaluable asset as a helicopter staging area for contractors in oil and gas development as well. The airport remains a reflection of the hospitable and hardworking nature of the citizens of Marshall County, providing a safe and inviting facility for the everyday flyer. Other activities supported by the airport include:

- ▲ Military Exercises/Training
- ▲ Aerial Inspections and Surveying
- ▲ Aircraft Flight Testing

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 2 supports 51 jobs, generating over \$3 million in payroll each year. Additionally, the airport supports roughly \$4 million in value added and nearly \$8 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	29	\$2,269,000	\$2,697,000	\$4,531,000
<b>Visitor Spending</b>	1	\$21,000	\$32,000	\$65,000
<b>Total Direct Impacts</b>	30	\$2,290,000	\$2,729,000	\$4,595,000
<b>Supplier Sales</b>	7	\$412,000	\$650,000	\$1,259,000
<b>Income Re-spending</b>	14	\$577,000	\$847,000	\$1,791,000
<b>Total Multiplier Impacts</b>	21	\$988,000	\$1,497,000	\$3,049,000
<b>Total</b>	<b>51</b>	<b>\$3,279,000</b>	<b>\$4,226,000</b>	<b>\$7,645,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 3

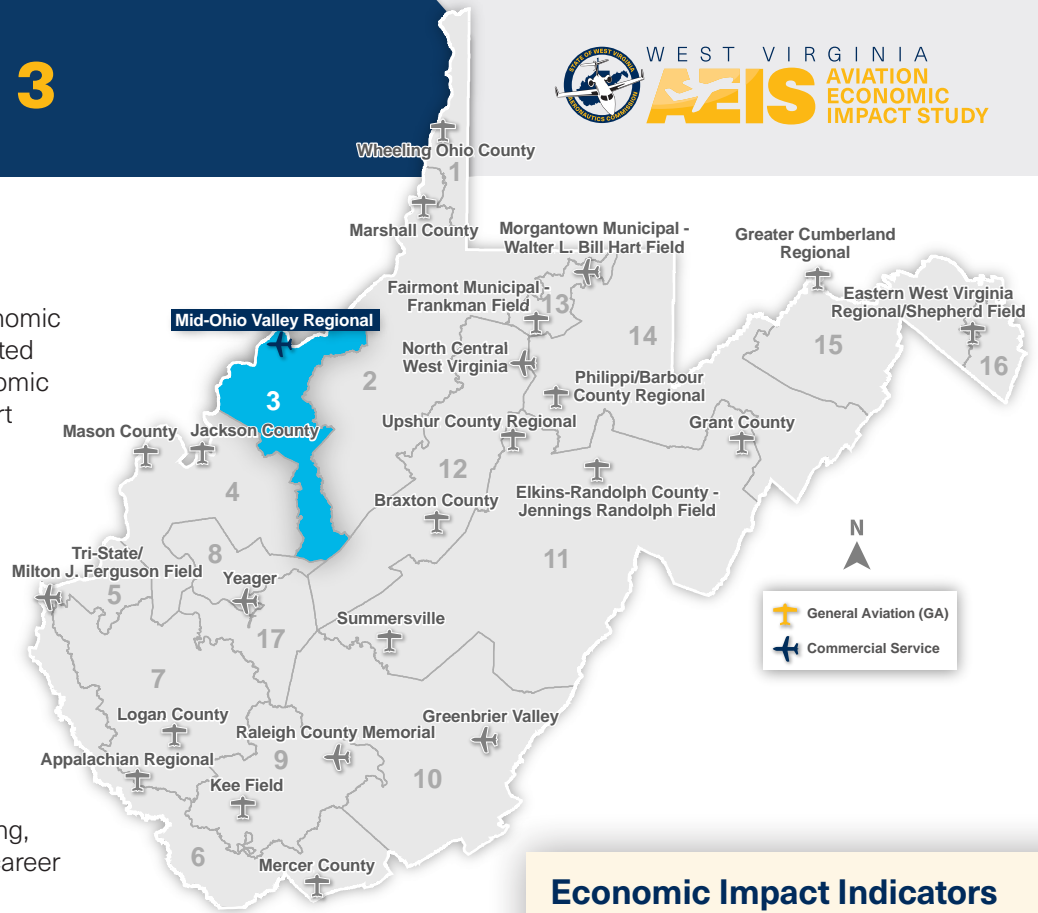
## STUDY OVERVIEW

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## Economic Impact Indicators

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## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
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	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
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### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
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	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 3

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 3 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Mid-Ohio Valley Regional Airport (PKB)** is a commercial service airport that provides scheduled airline service to Charlotte, North Carolina, through Contour Airlines, and is located in Parkersburg with a 7,240' runway. The airport supports all types of instrument approaches, is equipped with a crosswind runway, and operates full-service GA facilities, including a recently remodeled pilot's lounge. The airport is a popular training destination for these reasons and hopes to establish a full flight-school at their facility in the future. There is an Army National Guard facility on-site and the airport builds strong community relationships by hosting fly-ins, interacting with the Experimental Aircraft Association (EAA) Young Eagles, and offering a much-loved airport restaurant, Jerry's Fly Away Kitchen. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Police/Law Enforcement
- ▲ Medical Transport/Evacuation

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 3 supports over 1,000 jobs, generating approximately \$80 million in payroll each year. Additionally, the airport supports roughly \$102 million in value added and more than \$150 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	580	\$61,448,000	\$73,128,000	\$92,139,000
<b>Visitor Spending</b>	24	\$554,000	\$934,000	\$1,889,000
<b>Total Direct Impacts</b>	604	\$62,001,000	\$74,062,000	\$94,028,000
<b>Supplier Sales</b>	96	\$4,580,000	\$7,471,000	\$15,300,000
<b>Income Re-spending</b>	350	\$13,819,000	\$20,659,000	\$44,635,000
<b>Total Multiplier Impacts</b>	446	\$18,399,000	\$28,130,000	\$59,935,000
<b>Total</b>	<b>1,050</b>	<b>\$80,400,000</b>	<b>\$102,191,000</b>	<b>\$153,963,000</b>

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# Senate District 4

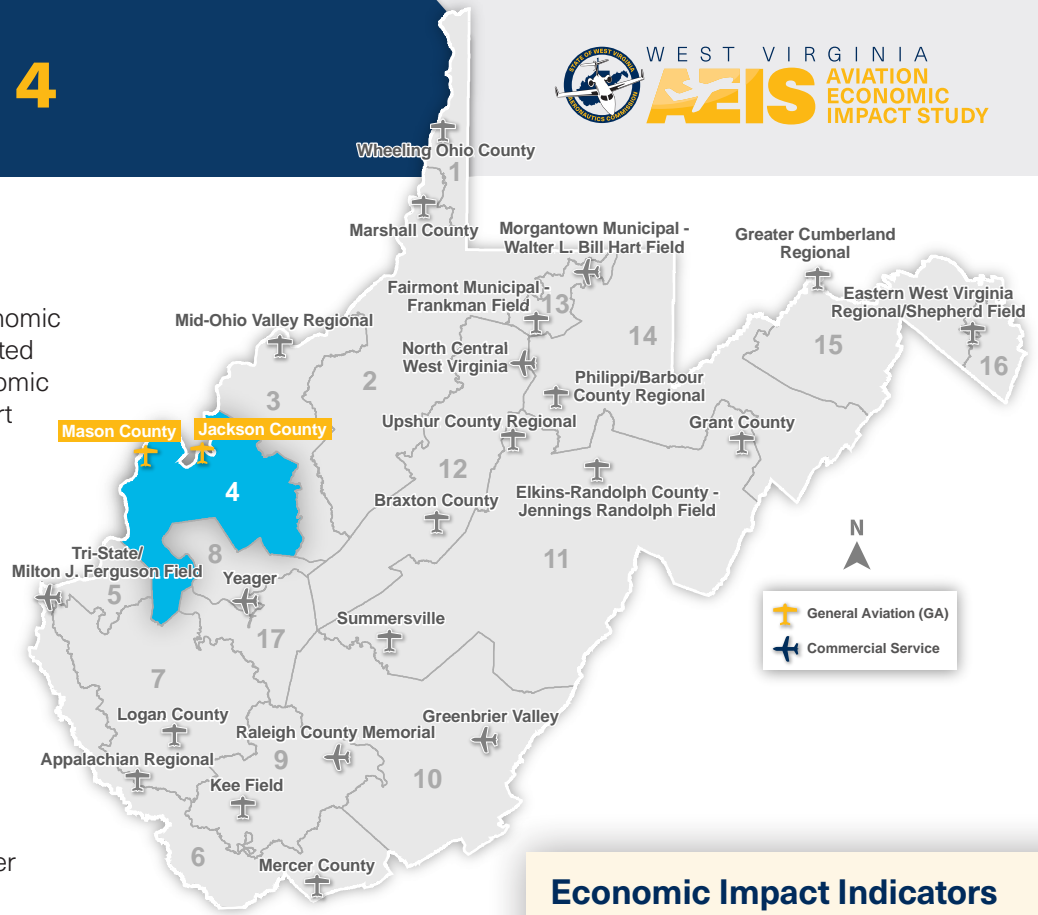
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**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 4

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 4 is home to two airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Mason County Airport (3I2)** is a GA airport located in Point Pleasant, near the Ohio border. The airport has a 4,000' runway and is used most frequently by recreational flyers and occasionally supports business activity. The airfield preserves its rich history through pictures and handwritten notes decorating the walls of the airport lounge, highlighting memories of pilots' "first flights" dating back to the 1970s. The airport has strong ties with the community, hosting different events that bring people to the airport. Other activities supported by the airport include:

- ▲ Medical Transport/Evacuation
- ▲ Aerial Photography/Surveying
- ▲ Career Training/Flight Instruction



**Jackson County Airport (I18)** is a GA airport located in Ravenswood, near the northwest border of West Virginia and the Ohio River. The airport, appropriately nicknamed "the Friendly Airport," has a 4,000' runway and supports business activity related to the nearby industrial park and other businesses in the region. The airport is also a hub for GA activity, offering flight training, maintenance facilities, and 24/7 fuel facilities. The airport is innovative when hosting community events and often provides recreational rides from local flight instructors to attract people to these events. Other activities supported by the airport include:

- ▲ Medical Transportation/Evacuation
- ▲ Military Exercises/Training
- ▲ Career Training/Flight Instruction

*Aerial airport photos courtesy of the Civil Air Patrol*



When combined, activity occurring at the airports in Senate District 4 supports almost 60 jobs, generating over \$3 million in payroll each year. Additionally, the two airports support over \$4 million in value added and more than \$8 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	30	\$2,030,000	\$2,485,000	\$4,658,000
<b>Visitor Spending</b>	5	\$124,000	\$204,000	\$409,000
<b>Total Direct Impacts</b>	35	\$2,153,000	\$2,690,000	\$5,068,000
<b>Supplier Sales</b>	9	\$421,000	\$698,000	\$1,390,000
<b>Income Re-spending</b>	15	\$596,000	\$890,000	\$1,911,000
<b>Total Multiplier Impacts</b>	24	\$1,017,000	\$1,588,000	\$3,301,000
<b>Total</b>	<b>59</b>	<b>\$3,170,000</b>	<b>\$4,277,000</b>	<b>\$8,369,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 5

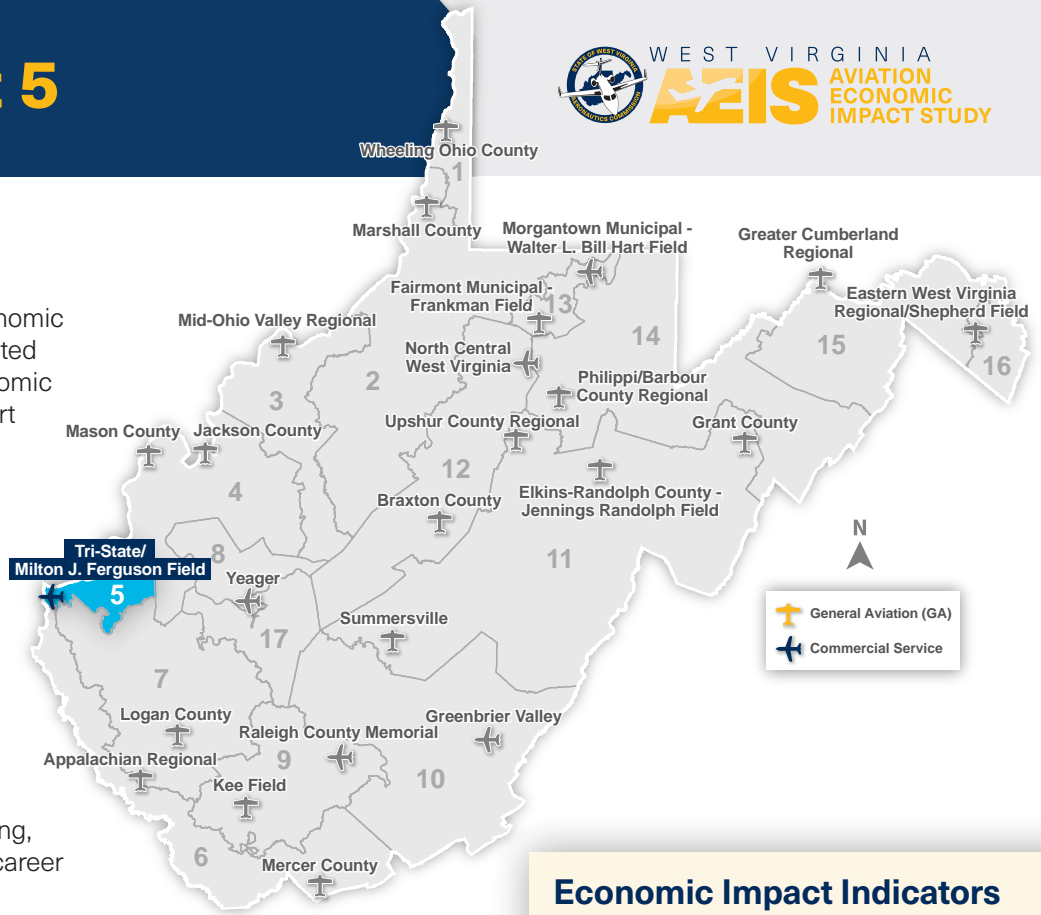
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 5

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 5 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Tri-State/Milton J. Ferguson Field (HTS)** is a commercial service airport located in Huntington with a 7,017' runway. The airport serves nearby communities in West Virginia, Kentucky, and Ohio, and offers flights to destinations in Florida and South Carolina via Allegiant Airlines, and to Charlotte, North Carolina, via American Airlines. The airport also caters to the GA community through its fixed-based operator (FBO), Huntington Jet Center. The airport is home to several businesses, including a FedEx Freight and Express facility, and is partnering with Marshall University to establish a Federal Aviation Administration (FAA)-certified Part 147 Aviation Maintenance and Technician School.) Other activities supported by the airport include:

- ▲ Medical Transportation/Evacuation
- ▲ Military Exercises/Training
- ▲ Corporate/Business Activity

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 5 supports almost 500 jobs, generating nearly \$22 million in payroll each year. Additionally, the airport supports over \$32 million in value added and almost \$62 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	260	\$13,188,000	\$19,422,000	\$35,142,000
<b>Visitor Spending</b>	55	\$1,593,000	\$2,584,000	\$5,068,000
<b>Total Direct Impacts</b>	315	\$14,781,000	\$22,006,000	\$40,210,000
<b>Supplier Sales</b>	65	\$3,280,000	\$5,148,000	\$10,202,000
<b>Income Re-spending</b>	90	\$3,553,000	\$5,304,000	\$11,516,000
<b>Total Multiplier Impacts</b>	155	\$6,833,000	\$10,453,000	\$21,717,000
<b>Total</b>	<b>471</b>	<b>\$21,614,000</b>	<b>\$32,459,000</b>	<b>\$61,927,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 6

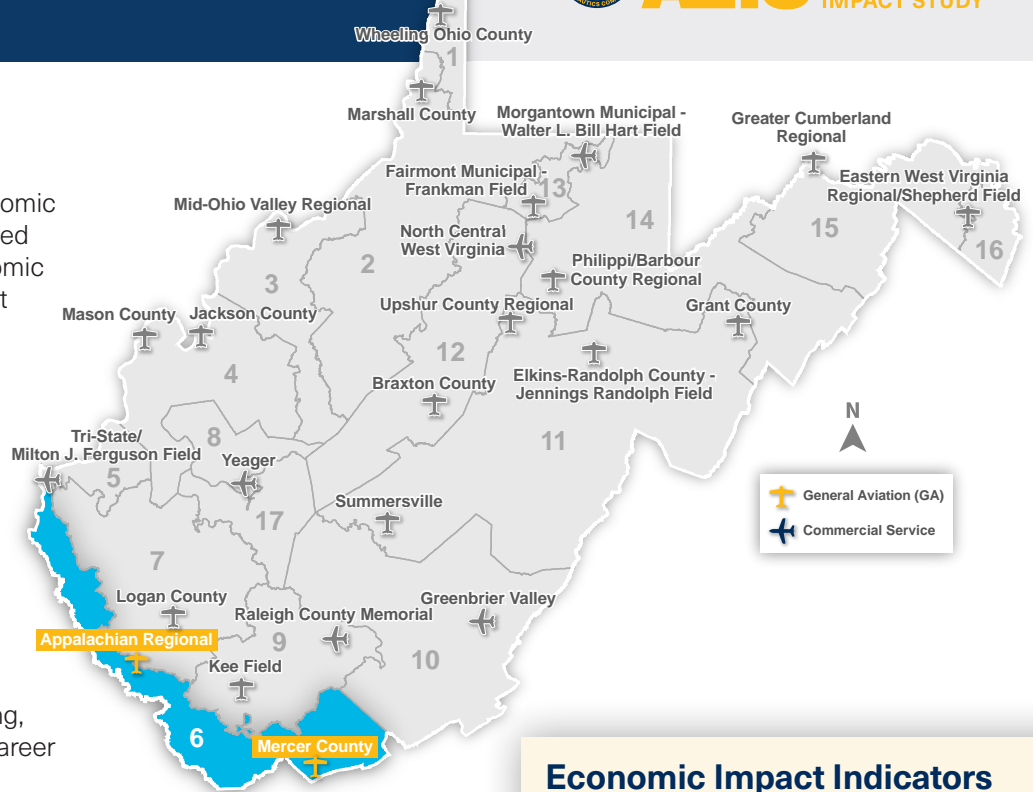
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

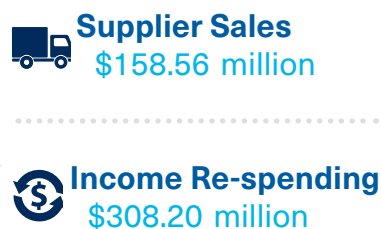
**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

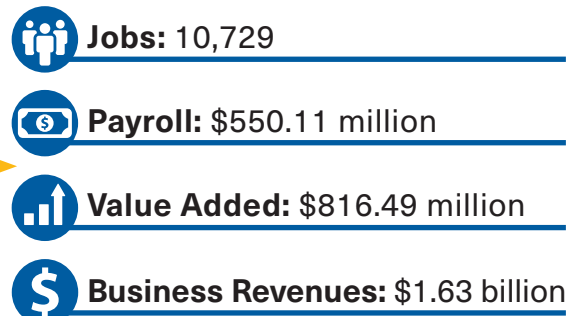
### Direct Impacts



### Multiplier Impacts



### Total Impacts



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 6

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 6 is home to two airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Appalachian Regional Airport (EBD)** is a GA facility located in Williamson with a 5,001' runway. The airport is relatively new, having been built to replace the former Mingo County Airport. Due to the airport's fairly remote location and minimal ambient light, it is often used for nighttime operations by military and civilian pilots in training. The airport recently started providing Jet A fuel in 2020. The next improvement the airport would like to see is the construction of a pilot and flight planning area so pilots can have a comfortable place to rest and plan their next flight. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Aerial Inspections
- ▲ Aircraft Flight Testing



**Mercer County Airport (BLF)** is a GA facility located in Bluefield with a 4,473' runway. The airport is a bustling facility that supports business aviation by forming strong community and business partnerships with local agencies and the general public. The airport manages the fixed-base operator (FBO) and is home to a Federal Aviation Administration (FAA) Part 133 helicopter operation. The airport attracts visitors for nearby recreational activities, participates in K-12 educational outreach, and is known to draw large domestic and international crowds for an annual Coal Show, often filling up the aircraft apron. Other activities supported by the airport include:

- ▲ Medical Transport/Evacuation
- ▲ Career Training/Flight Instruction
- ▲ Aerial Inspections

*Aerial airport photos courtesy of the Civil Air Patrol*



When combined, activity occurring at the airports in Senate District 6 supports 76 jobs, generating more than \$2.5 million in payroll each year. Additionally, the two airports support almost \$4 million in value added and nearly \$8 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	30	\$1,057,000	\$1,573,000	\$2,815,000
<b>Visitor Spending</b>	21	\$486,000	\$767,000	\$1,572,000
<b>Total Direct Impacts</b>	51	\$1,542,000	\$2,340,000	\$4,387,000
<b>Supplier Sales</b>	7	\$348,000	\$561,000	\$1,128,000
<b>Income Re-spending</b>	17	\$692,000	\$1,031,000	\$2,217,000
<b>Total Multiplier Impacts</b>	24	\$1,040,000	\$1,592,000	\$3,345,000
<b>Total</b>	<b>76</b>	<b>\$2,582,000</b>	<b>\$3,933,000</b>	<b>\$7,732,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 7

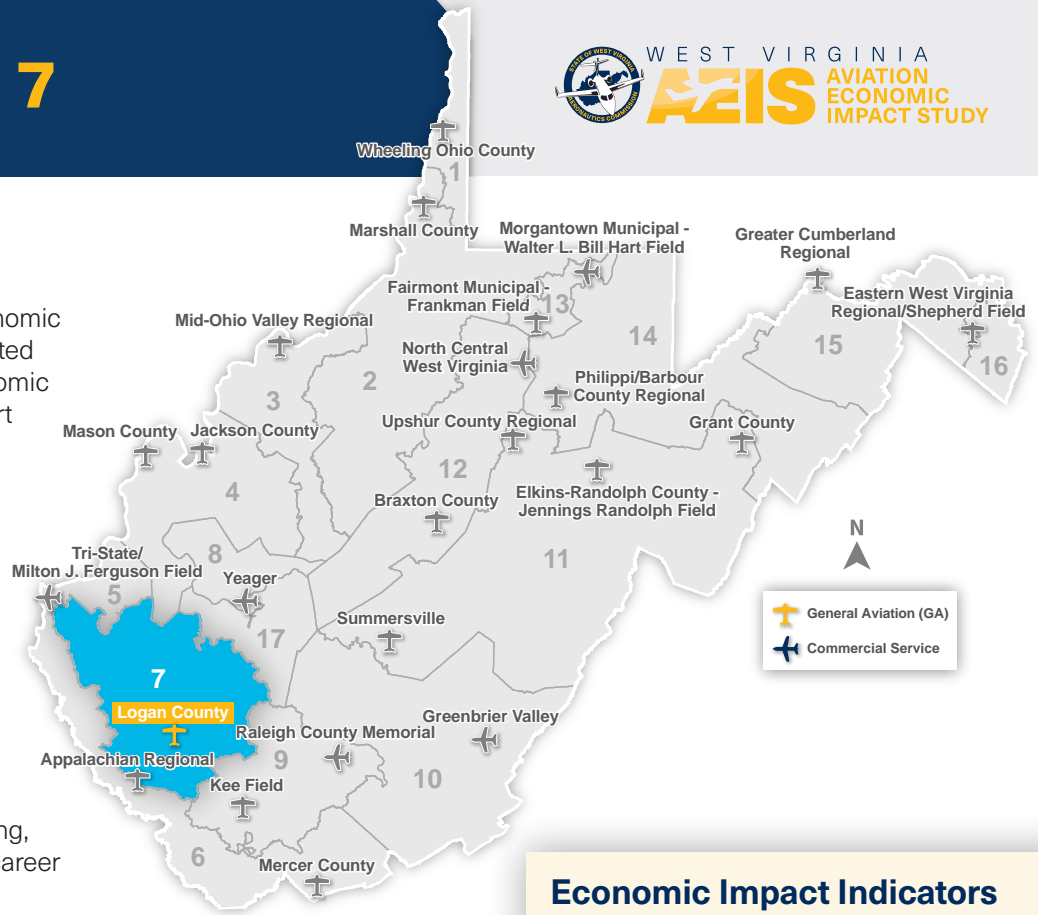
## STUDY OVERVIEW

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Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

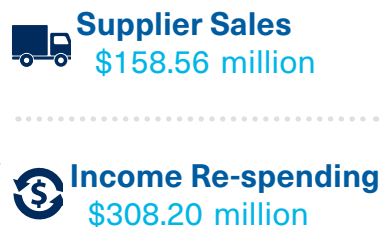
**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

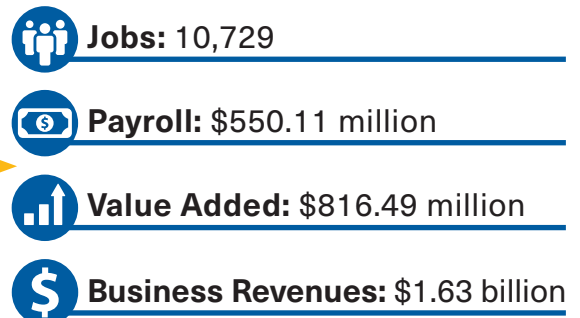
### Direct Impacts



### Multiplier Impacts



### Total Impacts



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 7

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 7 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Logan County Airport (6L4)** is a GA facility located in Logan and has a 3,605' runway. The airport serves the surrounding business community, recreational flyers, and the Air National Guard that relies on the airport to conduct various trainings. The airport hosts an annual Veteran Reunion Fly-in where "Miss Fit," the historic Vietnam War UH-1B helicopter, is on display and is occasionally used to offer rides to visitors of the event. The historic helicopter is owned by Marpat Aviation, a Federal Administration Aviation (FAA) Part 145 repair station located at the airport. Other activities supported by the airport include:

- ▲ Medical Transport/Evacuation
- ▲ Career Training/Flight Instruction
- ▲ Aerial Inspections

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 7 supports almost 30 jobs, generating over \$1 million in payroll each year. Additionally, the airport supports almost \$2 million in value added and more than \$3.5 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	20	\$851,000	\$1,240,000	\$2,397,000
<b>Visitor Spending</b>	1	\$12,000	\$19,000	\$41,000
<b>Total Direct Impacts</b>	21	\$863,000	\$1,260,000	\$2,438,000
<b>Supplier Sales</b>	4	\$173,000	\$289,000	\$582,000
<b>Income Re-spending</b>	5	\$194,000	\$290,000	\$630,000
<b>Total Multiplier Impacts</b>	9	\$368,000	\$579,000	\$1,212,000
<b>Total</b>	<b>29</b>	<b>\$1,231,000</b>	<b>\$1,839,000</b>	<b>\$3,650,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate Districts 8 and 17

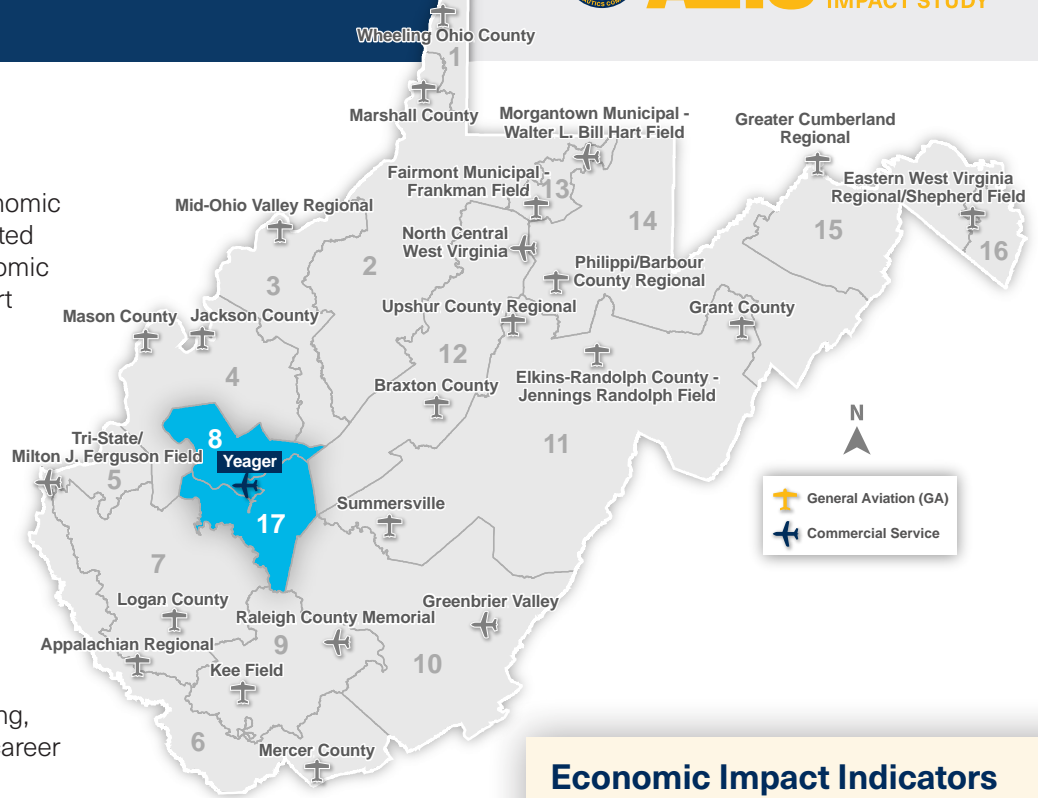
## STUDY OVERVIEW

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Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICTS 8 AND 17



The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. Districts 8 and 17 are adjacent to one another and between them sits the busiest commercial service airport in the state – Yeager Airport (CRW). The airport is physically located in District 8, however its catchment and service area extend much further, including into District 17. As such, it is important to recognize that the economic impact of this airport can be seen in both District 8 and District 17. The impacts of CRW are highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Yeager Airport (CRW)** is located in the state capital of Charleston with a 6,715' runway and scheduled air service provided by American Airlines, Delta Air Lines, United Airlines, and Spirit Airlines with nonstop service to Charlotte, Washington D.C., Philadelphia, Chicago, Atlanta, Orlando, and seasonally to Myrtle Beach. There is also a full-service fixed-base operator (FBO) on the field to support GA activities. The airport is considered one of the state's home bases for military training operations, with the Woody Williams Military Operations Center and the McLaughlin Air National Guard Base, 130<sup>th</sup> Airlift Wing on-site. Additionally, the airport partnered with Marshall University's Bill Noe Flight School to establish a new Federal Aviation Administration (FAA)-certified Part 141 flight school at the airport that will open in 2021. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Aerial Inspections
- ▲ Medical Transport/Evacuation

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at CRW supports almost 3,000 jobs, generating over \$100 million in payroll each year. Additionally, the airport supports roughly \$147 million in value added and \$225 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	1,982	\$67,535,000	\$86,395,000	\$107,062,000
<b>Visitor Spending</b>	381	\$10,826,000	\$18,170,000	\$35,033,000
<b>Total Direct Impacts</b>	2,363	\$78,361,000	\$104,565,000	\$142,095,000
<b>Supplier Sales</b>	158	\$8,714,000	\$13,728,000	\$25,518,000
<b>Income Re-spending</b>	418	\$19,075,000	\$28,578,000	\$57,692,000
<b>Total Multiplier Impacts</b>	576	\$27,789,000	\$42,306,000	\$83,211,000
<b>Total</b>	<b>2,940</b>	<b>\$106,150,000</b>	<b>\$146,871,000</b>	<b>\$225,306,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 9

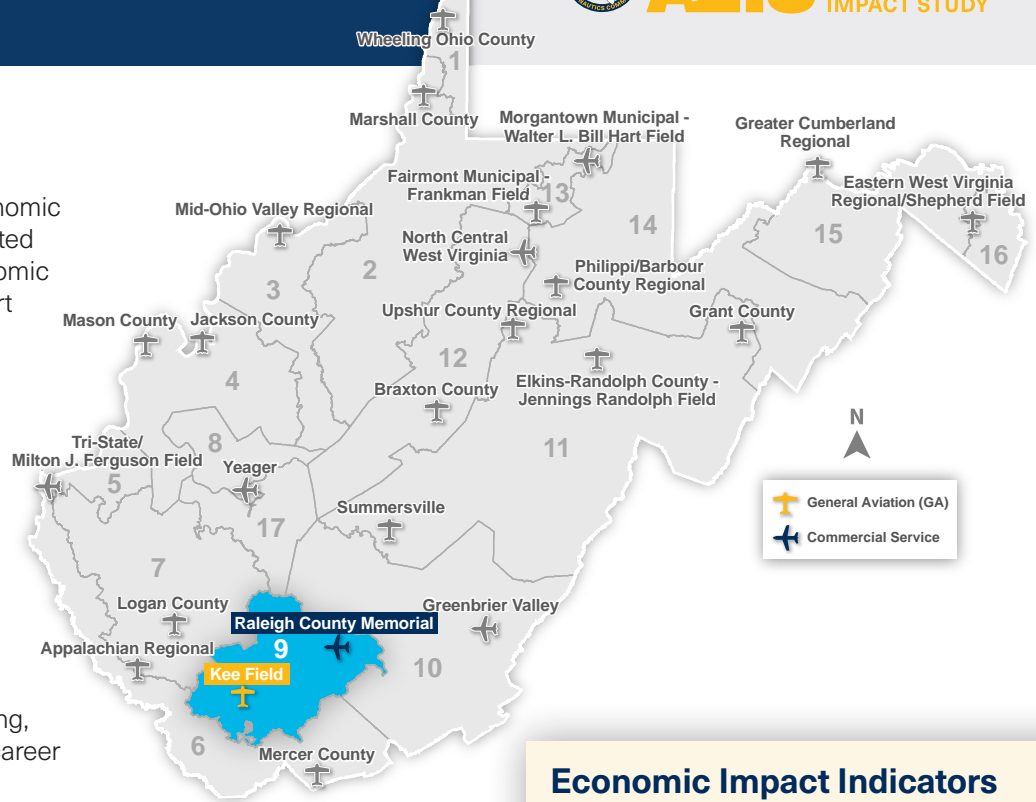
## STUDY OVERVIEW

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Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts



### Multiplier Impacts



### Total Impacts



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 9

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 9 is home to two airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Raleigh County Memorial Airport (BKW)** is a commercial service airport located in Beckley with a 6,750' runway. The airport provides daily non-stop flights to Parkersburg and Charlotte, North Carolina, through Contour Airlines, and supports the business aviation and GA communities through the full-service fixed-base operator (FBO), Albatross Air. The airport and FBO conduct K-12 outreach to educate students about careers in aviation and even offer scholarships to high school students interested in flight training. New expansions are underway at the airport to support the aerospace industry, including runway access site development and partnership agreements with New River Community Technical College for an Federal Aviation Administration (FAA)-certified Part 147 Aviation Maintenance and Technician School. Other activities supported at the airport include:

- ▲ Aircraft Flight Testing
- ▲ Career Training/Flight Instruction
- ▲ Medical Transportation/Evacuation



**Kee Field (I16)** is a GA airport located in Pineville with a 3,701' runway. The airport is well maintained and favored by pilots who know that when they fly into Kee Field they will always be met with a smile and excellent service. The airport makes visitors feel welcome and sees a notable amount of interstate traffic for its size because the service is excellent and charge rates are low. The airport is most frequented by recreational flyers seeking some adventure in the surrounding community. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Aerial Inspections
- ▲ Police/Law Enforcement

*Aerial airport photos courtesy of the Civil Air Patrol*



When combined, activity occurring at the airports in Senate District 9 support 143 jobs, generating more than \$6.5 million in payroll each year. Additionally, the two airports support nearly \$9.5 million in value added and over \$18 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	75	\$3,817,000	\$5,268,000	\$9,674,000
<b>Visitor Spending</b>	16	\$451,000	\$755,000	\$1,442,000
<b>Total Direct Impacts</b>	91	\$4,268,000	\$6,021,000	\$11,116,000
<b>Supplier Sales</b>	21	\$1,086,000	\$1,682,000	\$3,336,000
<b>Income Re-spending</b>	29	\$1,162,000	\$1,734,000	\$3,721,000
<b>Total Multiplier Impacts</b>	50	\$2,248,000	\$3,415,000	\$7,057,000
<b>Total</b>	<b>143</b>	<b>\$6,516,000</b>	<b>\$9,437,000</b>	<b>\$18,174,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 10

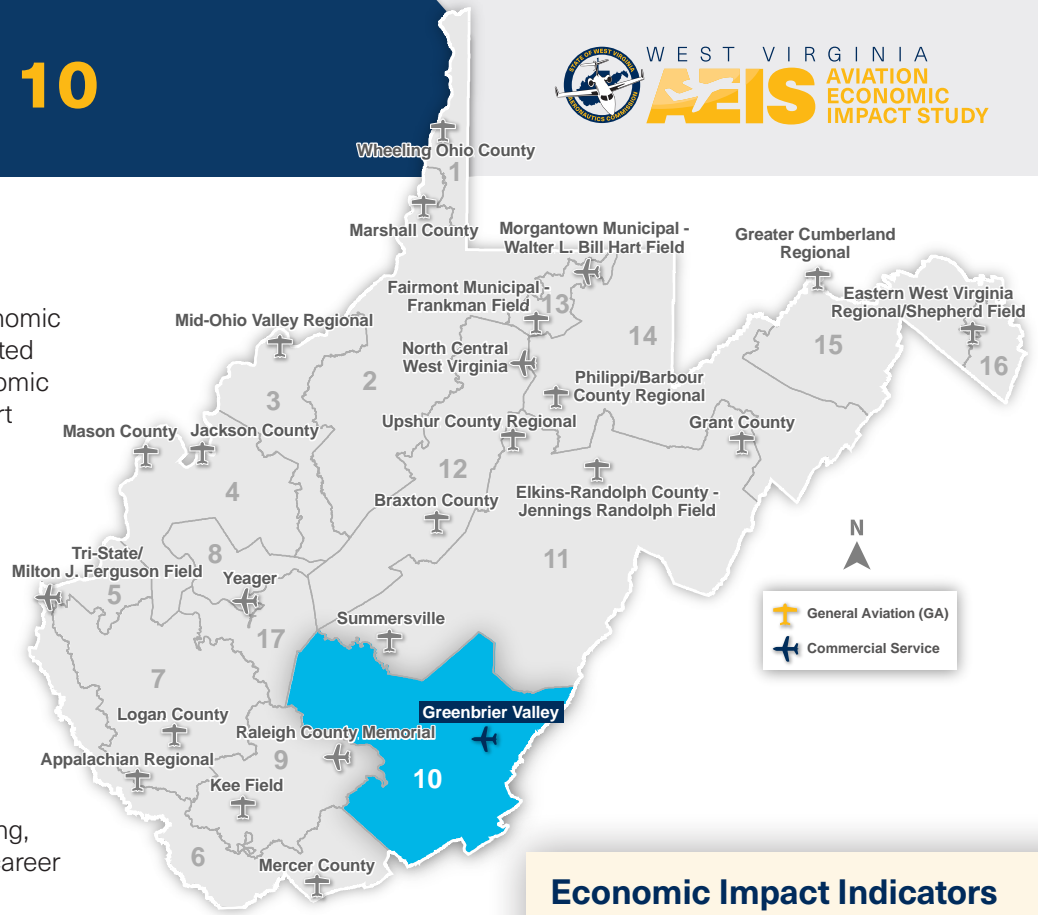
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 10

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 10 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Greenbrier Valley Airport (LWB)** is a commercial service airport located in Lewisburg with a 7,003' runway. The airport is located in the heart of the beautiful Greenbrier Valley and offers scheduled airline service on United Airlines to Chicago, Illinois, and Washington, D.C. The airport also supports the GA community through a full-service fixed-base operator (FBO). The airport's close proximity to the Lewisburg community is essential for business and leisure travelers arriving by commercial service or private aircraft. The airport also sees significant passenger activity traveling to the airport to reach The Greenbrier, a world-famous resort, located just 12 miles from the airport. The resort brings crowds of visitors to the region year-round. Other activities supported by the airport include:

- ▲ Medical Transport/Evacuation
- ▲ Police/Law Enforcement
- ▲ Career Training/Flight Instruction

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 10 supports 365 jobs, generating over \$15 million in payroll each year. Additionally, the airport supports more than \$26.5 million in value added and roughly \$50.5 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	100	\$5,720,000	\$11,319,000	\$20,384,000
<b>Visitor Spending</b>	136	\$3,795,000	\$6,400,000	\$11,779,000
<b>Total Direct Impacts</b>	236	\$9,515,000	\$17,719,000	\$32,163,000
<b>Supplier Sales</b>	64	\$3,095,000	\$4,983,000	\$9,858,000
<b>Income Re-spending</b>	66	\$2,650,000	\$3,951,000	\$8,484,000
<b>Total Multiplier Impacts</b>	130	\$5,744,000	\$8,934,000	\$18,342,000
<b>Total</b>	<b>365</b>	<b>\$15,260,000</b>	<b>\$26,652,000</b>	<b>\$50,505,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 11

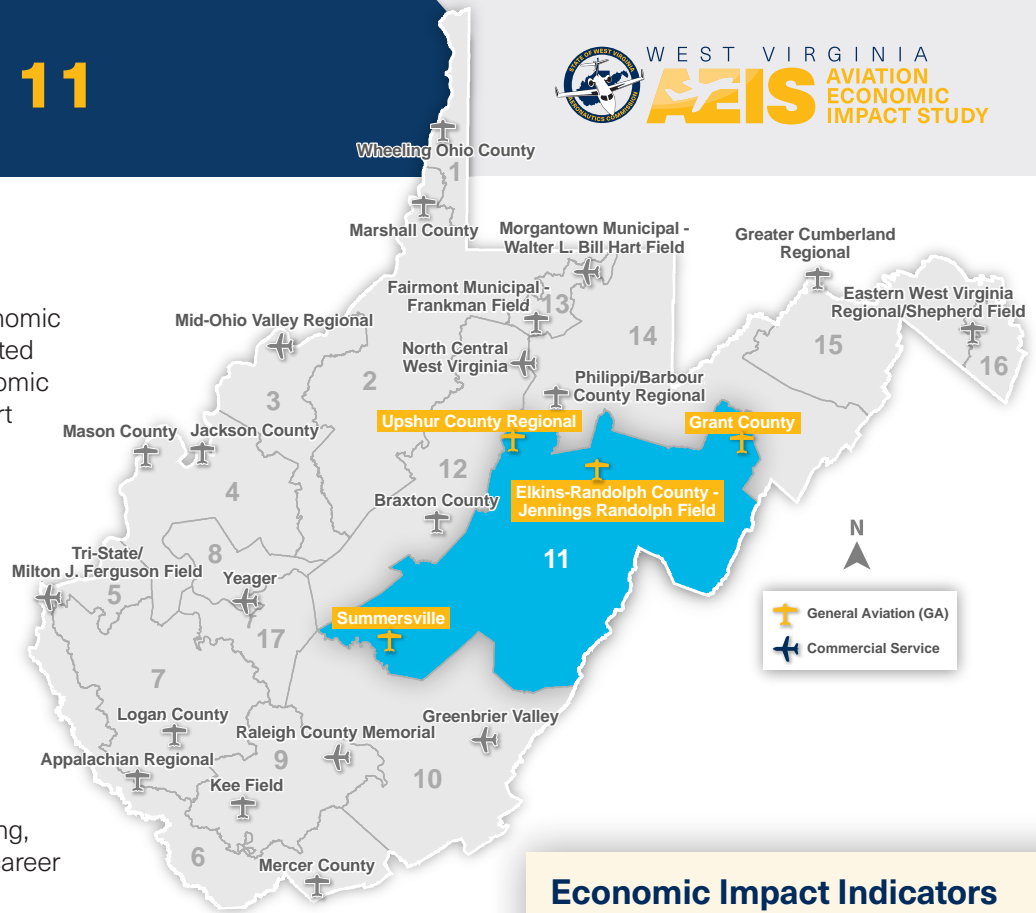
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

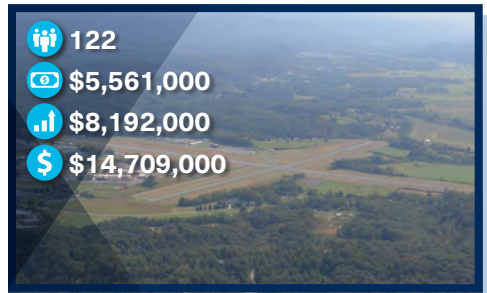
	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 11

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 11 is home to four GA airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Elkins-Randolph County - Jennings Randolph Field (EKN)** is a GA facility located in Elkins with a 4,501' runway. The airport serves users accessing recreational activities and supports military operations, medical transport, power and gas line inspection, as well as:

- ▲ Career Training/Flight Instruction
- ▲ Police/Law Enforcement
- ▲ Corporate/Business Activity



**Grant County Airport (W99)** is a GA facility located in Petersburg with a 5,000' runway. The airport is home to one of the few glider flying and training operations in the state. W99 also maintains a "Fly and Tie" campsite so visitors arriving via private aircraft can camp on the airport-maintained campground. The airport also supports activities such as:

- ▲ Search & Rescue/Civil Air Patrol
- ▲ Aircraft Flight Testing
- ▲ Military Exercises



**Summersville Airport (SXL)** is a GA facility located in Summersville with a 3,015' runway. The airport is a gateway to some of the popular outdoor recreational opportunities in the state, particularly due to its proximity to Gauley River and Summersville Lake. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Mountaineering
- ▲ Sightseeing



**Upshur County Regional Airport (W22)** is a GA facility located in Buckhannon with a 4,201' runway. W22 is a regional hub for emergency medical flights and supports operations related to aerial sawing and environmental protection. Additionally, it serves activities such as:

- ▲ Sightseeing
- ▲ Corporate/Business Activity
- ▲ Police/Law Enforcement

Aerial airport photos courtesy of the Civil Air Patrol



When combined, activity occurring at these four airports in Senate District 11 support almost 200 jobs, generating nearly \$9 million in payroll each year. Additionally, the four airports support approximately \$13 million in value added and more than \$24 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	107	\$5,826,000	\$8,205,000	\$14,310,000
<b>Visitor Spending</b>	12	\$265,000	\$433,000	\$877,000
<b>Total Direct Impacts</b>	112	\$6,091,000	\$8,638,000	\$15,188,000
<b>Supplier Sales</b>	27	\$1,134,000	\$1,816,000	\$3,872,000
<b>Income Re-spending</b>	41	\$1,559,000	\$2,334,000	\$5,169,000
<b>Total Multiplier Impacts</b>	68	\$2,692,000	\$4,150,000	\$9,042,000
<b>Total</b>	<b>187</b>	<b>\$8,784,000</b>	<b>\$12,786,000</b>	<b>\$24,230,000</b>

Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# Senate District 12

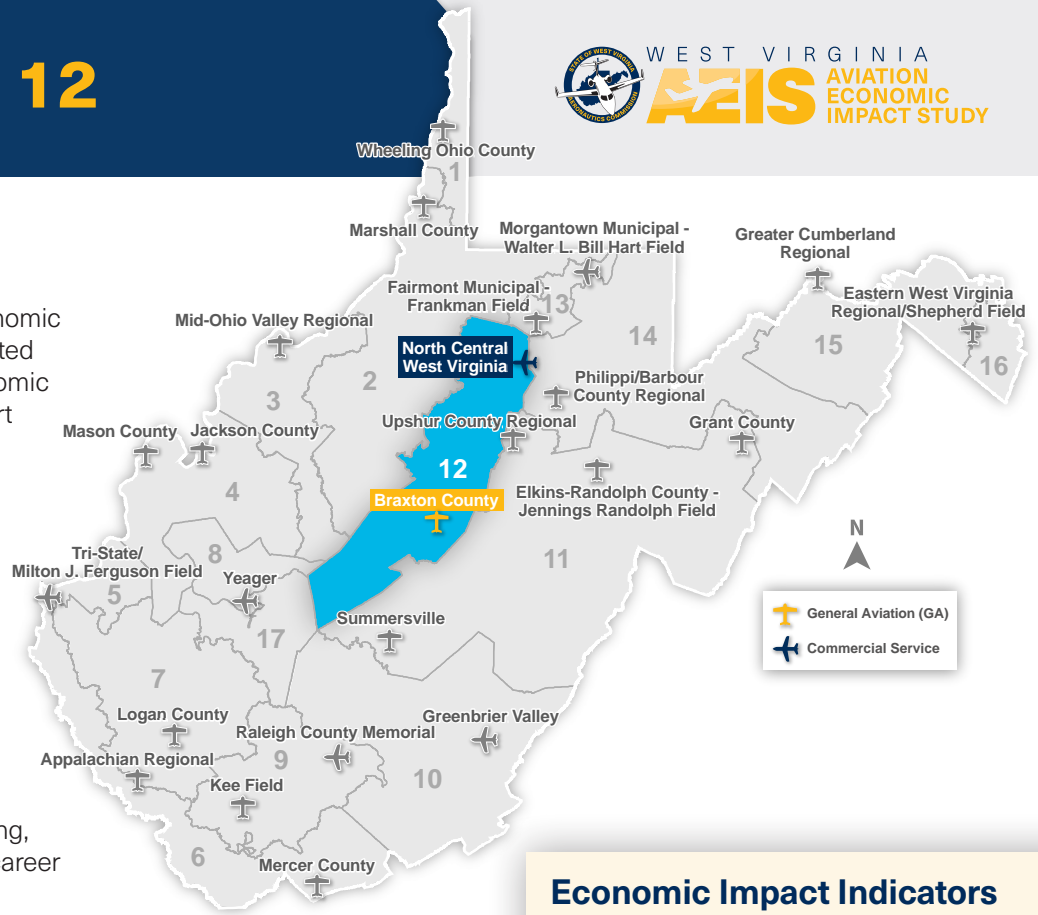
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

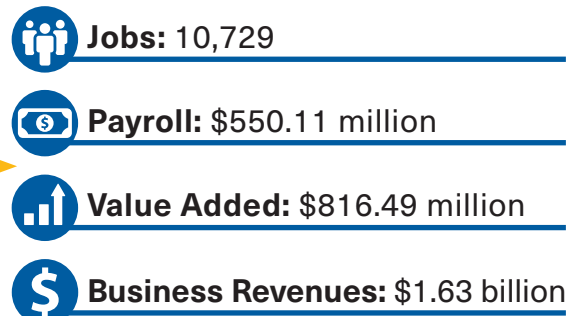
### Direct Impacts



### Multiplier Impacts



### Total Impacts





# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 12

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 12 is home to two airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Braxton County Airport (48I)** is a GA facility in Sutton with a 3,995' runway. The airport serves business and recreation users in the surrounding region and sees a high percentage of transient (out of state) operations due its unique geographic location in the center of the state, easily accessible to intra- and interstate markets. The airport is growing to meet nearby corporate demand by expanding covered aircraft storage facilities. Other activities supported by the airport include:

- ▲ Medical Transport/Evacuation
- ▲ Aerial Photography/Surveying
- ▲ Aerial Inspections



**North Central West Virginia (CKB)** is a commercial service airport in Clarksburg with a 7,800' runway. CKB offers daily service to Chicago and Washington, D.C., via United Airlines, and seasonal service to Orlando, Destin, and Myrtle Beach via Allegiant Airlines. The airport's fixed-base operator (FBO), V1 Aviation, accommodates GA and corporate aviation traffic. The Mid-Atlantic Aerospace Complex (MAAC) is located at the airport and is comprised of aviation and aerospace industry leaders. The MAAC supports essential training programs, including a Federal Aviation Administration (FAA)-certified Part 147 Aviation Maintenance and Technician School, and FAA-certified Part 141 Professional Flight Training program. Other activities supported by the airport include:

- ▲ Aerospace Manufacturing
- ▲ Corporate/Business Activity
- ▲ Military Exercises/Training

*Aerial airport photos courtesy of the Civil Air Patrol*



When combined, activity occurring at the airports in Senate District 12 support over 2,000 jobs, generating almost \$170 million in payroll each year. Additionally, the two airports support almost \$300 million in value added and over \$775 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	1,270	\$118,096,000	\$220,073,000	\$621,310,000
<b>Visitor Spending</b>	58	\$1,497,000	\$2,480,000	\$4,943,000
<b>Total Direct Impacts</b>	1,328	\$119,593,000	\$222,553,000	\$626,253,000
<b>Supplier Sales</b>	308	\$18,310,000	\$27,836,000	\$54,652,000
<b>Income Re-spending</b>	712	\$30,336,000	\$45,402,000	\$94,796,000
<b>Total Multiplier Impacts</b>	1,020	\$48,646,000	\$73,239,000	\$149,447,000
<b>Total</b>	<b>2,349</b>	<b>\$168,238,000</b>	<b>\$295,791,000</b>	<b>\$775,701,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. CKB's "2019 Economic Activity Analysis" accounted for off-airport impacts which are not reflected in this study. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 13

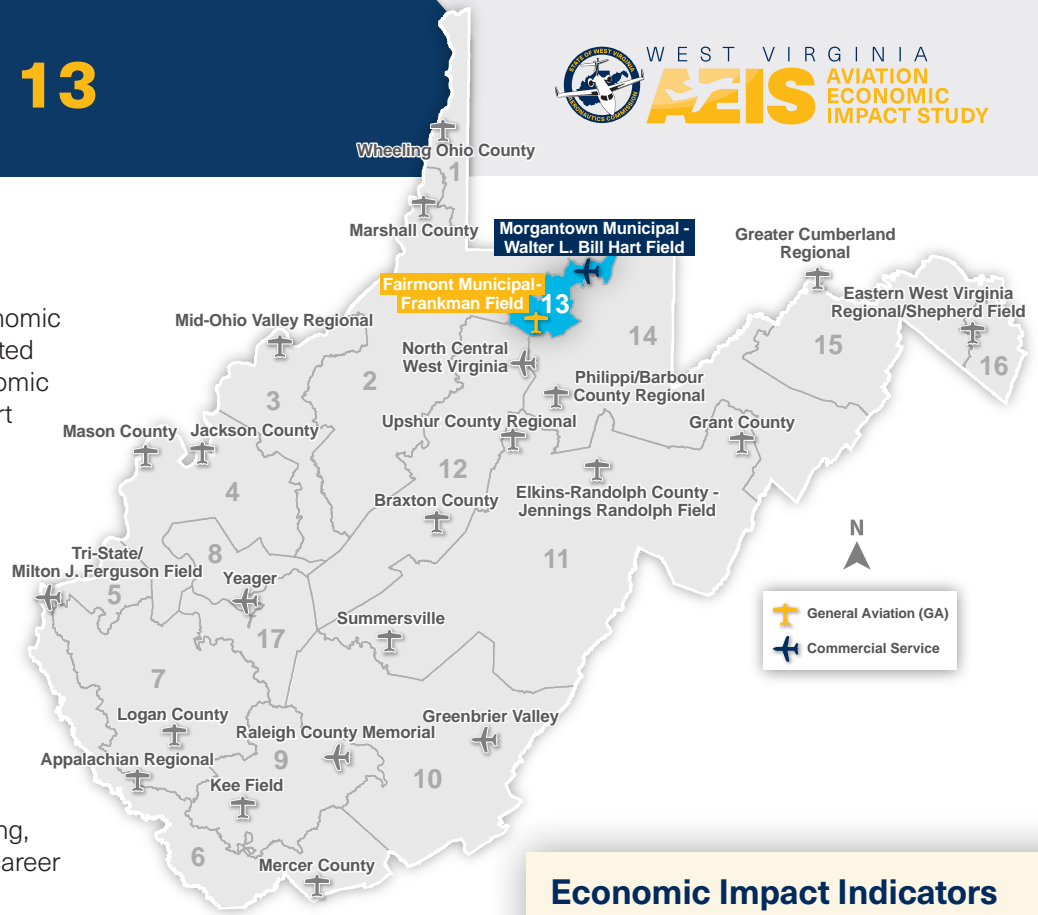
## STUDY OVERVIEW

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Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

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Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

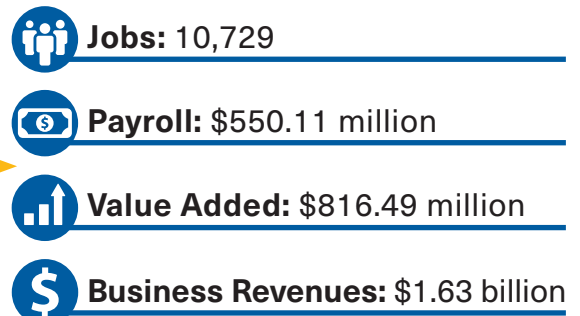
### Direct Impacts



### Multiplier Impacts



### Total Impacts



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 13

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 13 is home to two airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Fairmont Municipal – Frankman Field (4G7)** is a GA airport in Fairmont with a 2,965' runway. The airport serves business and recreational users and the airport's close proximity to numerous highway and interstate corridors, nearby accommodations, and restaurants make it an ideal airport for transient visitors. The airport hosts a number of community events, including a monthly Experimental Aircraft Association (EAA) meeting and a popular annual Aviation Day event. Other activities supported by the airport include:

- ▲ Military Exercises/Training
- ▲ Police/Law Enforcement
- ▲ Career Training/Flight Instruction



**Morgantown Municipal – Walter L. Bill Hart Field (MGW)** is a commercial service airport in Morgantown with a 5,199' runway. The airport offers daily flights to Baltimore, Maryland, and Pittsburgh, Pennsylvania, via Southern Airways Express. The airport also supports GA activity and experiences a significant increase in traffic during the collegiate level Big 12 sport season. The airport recently broke ground on a 1,001' runway extension to improve runway safety and better accommodate all airport users. Other activities supported by the airport include:

- ▲ Medical Transport/Evacuation
- ▲ Career Training/Flight Instruction
- ▲ Aircraft Flight Testing

Aerial airport photos courtesy of the Civil Air Patrol



When combined, activity occurring at the airports in Senate District 13 support over 300 jobs, generating nearly \$14 million in payroll each year. Additionally, the two airports support more than \$21 million in value added and over \$44 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	137	\$7,089,000	\$10,785,000	\$23,297,000
<b>Visitor Spending</b>	56	\$1,400,000	\$2,272,000	\$4,440,000
<b>Total Direct Impacts</b>	193	\$8,490,000	\$13,057,000	\$27,738,000
<b>Supplier Sales</b>	52	\$2,612,000	\$4,158,000	\$8,271,000
<b>Income Re-spending</b>	62	\$2,631,000	\$3,935,000	\$8,220,000
<b>Total Multiplier Impacts</b>	114	\$5,244,000	\$8,093,000	\$16,491,000
<b>Total</b>	<b>306</b>	<b>\$13,733,000</b>	<b>\$21,150,000</b>	<b>\$44,229,000</b>

Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Commercial Air Passenger Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.

# Senate District 14

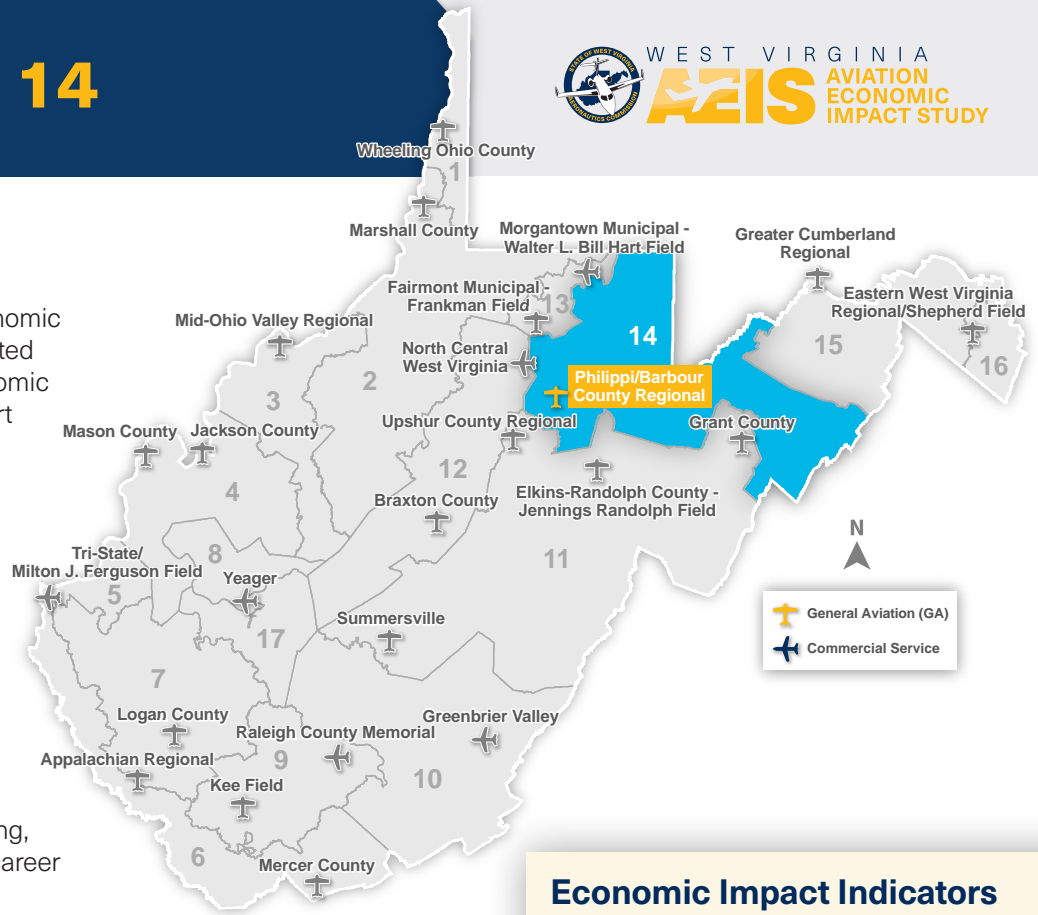
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 14

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 14 is home to one airport highlighted below, including the jobs, payroll, value added, and business revenues supported by the facility.



**Philippi/Barbour County Regional Airport (79D)** is GA facility located in Philippi with a 3,275' runway. The airport supports a variety of aerial inspection operations from law enforcement agencies, wildlife management agencies, natural resource management organizations, and the local Civil Air Patrol squadron. The airport also experiences increased operations during the collegiate sport seasons because of the nearby Alderson Broaddus University, attracting alumni, parents, and other supporters attending the college sporting events. Other activities supported by this airport include:

- ▲ Corporative/Business Activity
- ▲ Search & Rescue/Civil Air Patrol
- ▲ Medical Transport/Evacuation

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport in Senate District 14 supports 9 jobs, generating over \$400,000 in payroll each year. Additionally, the airport supports more than \$500,000 in value added and close to \$1 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	6	\$270,000	\$329,000	\$432,000
<b>Visitor Spending</b>	-	\$3,000	\$5,000	\$10,000
<b>Total Direct Impacts</b>	6	\$273,000	\$334,000	\$442,000
<b>Supplier Sales</b>	1	\$28,000	\$49,000	\$96,000
<b>Income Re-spending</b>	3	\$106,000	\$159,000	\$338,000
<b>Total Multiplier Impacts</b>	4	\$134,000	\$208,000	\$434,000
<b>Total</b>	<b>9</b>	<b>\$408,000</b>	<b>\$542,000</b>	<b>\$876,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. Where the table indicates no jobs but includes estimates for payroll, value added, and business revenues, individuals worked less than half-time on airport-related activities. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBPA US using IMPLAN V.3 2018, 2021.*



# Senate District 15

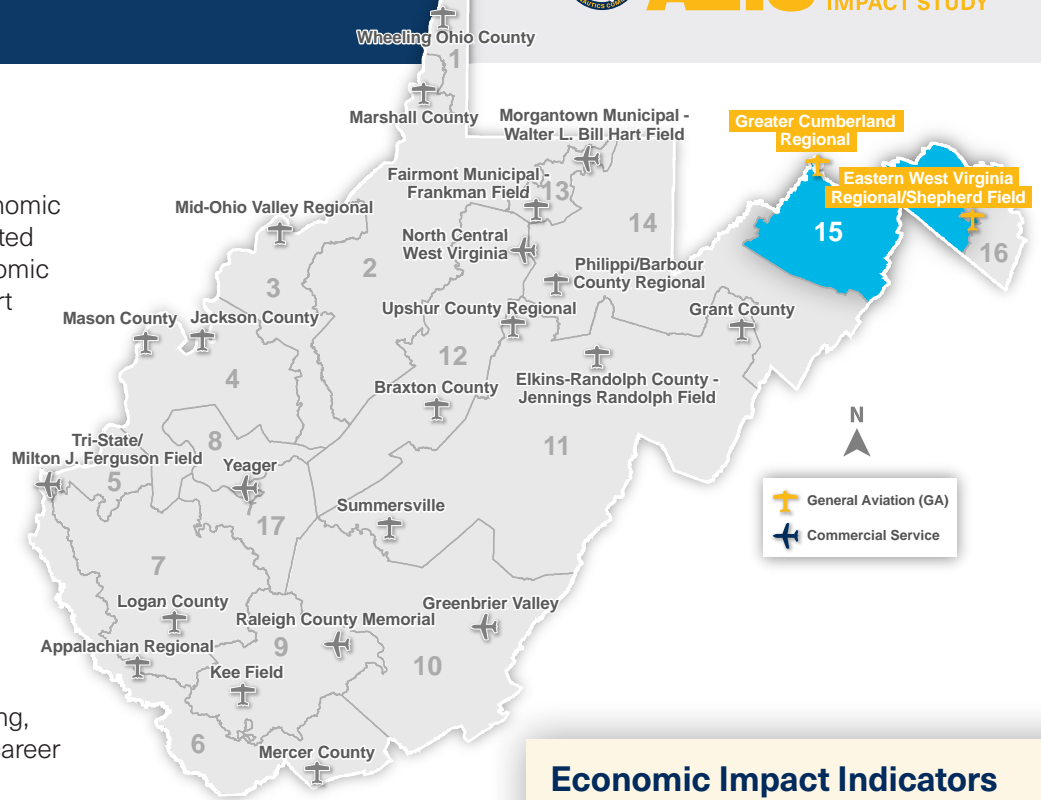
## STUDY OVERVIEW

The 2020 West Virginia Aviation Economic Impact Study (WV AEIS) was conducted using 2019 data to quantify the economic contributions of West Virginia's airport system to the state's economy. The 24 publicly owned airports in the state support the transportation of people, goods, and services to, from, and within the Mountain State. Not only does this generate quantitative economic impacts through job creation and business operation, but airports also enhance the quality of life for West Virginians by supporting air ambulance operations, remote access and evacuation, just-in-time deliveries, aerial firefighting, law enforcement, research, aviation career opportunities, and much more.

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's seven commercial service airports and 17 general aviation (GA) airports, and when air cargo transported via the state's airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Direct impacts of aviation in West Virginia total \$1.16 billion annually. When combined with the impacts from supplier sales and income re-spending, the state's 24 airports support nearly 11,000 jobs, over \$550 million in payroll, \$816 million in value added, and \$1.63 billion in business revenues each year. In addition, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.



## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion

# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 15

The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. District 15 is home to two airports highlighted below, including the jobs, payroll, value added, and business revenues generated by each.



**Eastern West Virginia Regional/Shepherd Field (MRB)** is a busy GA airport located in Martinsburg with an 8,815' runway. The airport has more based aircraft than any other airport in the state, offers a Federal Aviation Administration (FAA)-certified Part 135 charter service under the name "MRB Aviation," and provides a full-service fixed-base operator (FBO). MRB has the longest and widest runway in the state, meaning it can accommodate some of the world's largest aircraft and frequently supports military training visits. MRB is the only airport in the state with an on-airport Foreign Trade Zone, and is home to two flight training companies, one of which is FAA-certified Part 141. Additionally, the airport hosts the 167<sup>th</sup> Airlift Wing, the largest Air National Guard base in the state. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Medical Transport/Evacuation
- ▲ Location of Community Facilities



**Greater Cumberland Regional Airport (CBE)** is a GA facility located in Cumberland with a 5,047' runway. The airport not only serves the surrounding region in West Virginia, but because of its location, also serves nearby areas in Maryland and Pennsylvania. The airport's competitive facility rates and designation as a non-profit 501c (3) organization makes it a highly desirable location to base aircraft according to airport users in the tri-state area. The airport maintains a commercial-sized box hangar capable of housing several large itinerant and based aircraft. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Gliders/Soaring
- ▲ Career Training/Flight Instruction

*Aerial airport photos courtesy of the Civil Air Patrol*



When combined, activity occurring at the airports in Senate District 15 supports more than 2,000 jobs, generating over \$93.5 million in payroll each year. Additionally, the two airports support almost \$115 million in value added and more than \$160 million in business revenues annually.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	1,744	\$74,106,000	\$85,189,000	\$100,110,000
<b>Visitor Spending</b>	10	\$258,000	\$413,000	\$781,000
<b>Total Direct Impacts</b>	1,754	\$74,365,000	\$85,603,000	\$100,891,000
<b>Supplier Sales</b>	61	\$2,815,000	\$4,520,000	\$9,326,000
<b>Income Re-spending</b>	408	\$16,422,000	\$24,497,000	\$52,588,000
<b>Total Multiplier Impacts</b>	469	\$19,237,000	\$29,018,000	\$61,914,000
<b>Total</b>	<b>2,223</b>	<b>\$93,601,000</b>	<b>\$114,620,000</b>	<b>\$162,805,000</b>

*Notes: Totals may not add due to rounding. The impacts shown are statewide impacts of the airport(s) in the district. Metrics (jobs, payroll, value added, and business revenues) represent various components of an airport's economic impact and are not additive. To maintain consistency among airports in this study, activity considered "on-airport" is defined by what is on/at each airport and does not account for off-airport businesses. Sources: WV AEIS Airport Manager Survey; Airport Tenant Survey; Transient GA Pilot & Passenger Survey, 2020; FAA 5010 Airport Master Record, FAA Terminal Area Forecast, Airline Data, Inc., 2019; Longwoods International, 2018; Calculations by EBP US using IMPLAN V.3 2018, 2021.*

# Senate District 16

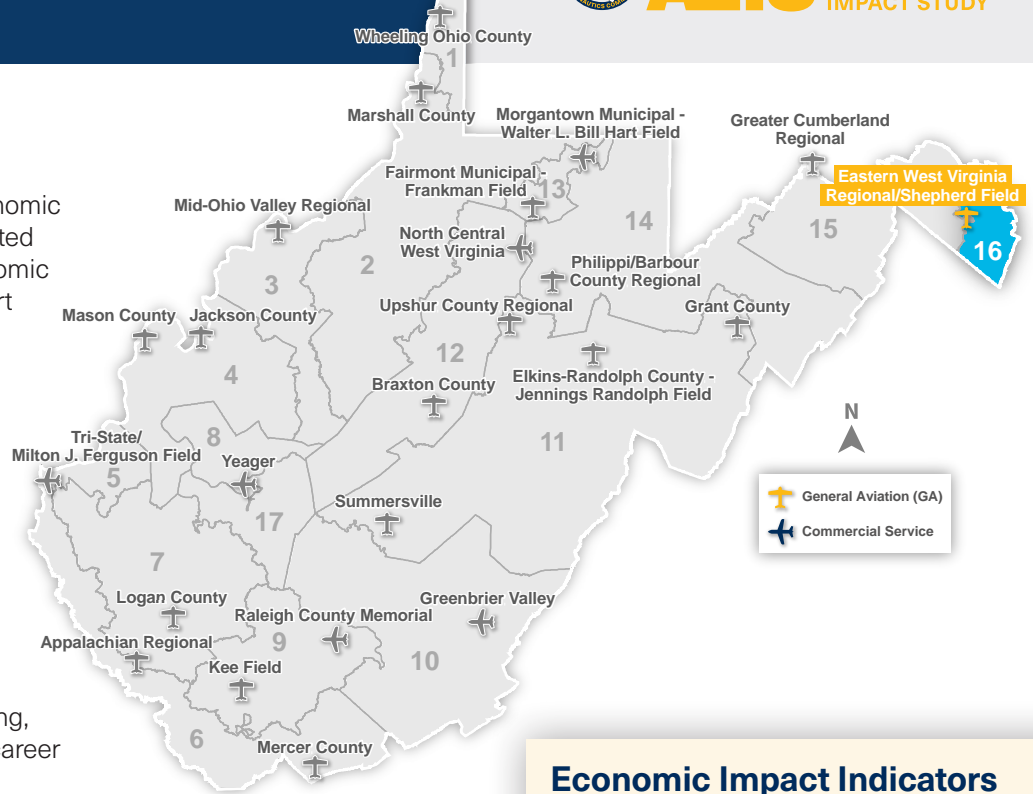
## STUDY OVERVIEW

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## Economic Impact Indicators

**Jobs:** The number of employed people

**Payroll:** The sum of compensation to workers (salaries, wages, and benefits) and proprietor income

**Value Added:** The value contributed to a product or service provided by a firm or group of firms. Value added is aviation's contribution to West Virginia's Gross State Product (GSP)

**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts

### Direct Impacts

	<b>On-Airport Activity</b> \$1.04 billion
	<b>Visitor Spending</b> \$69.16 million
	<b>Air Cargo</b> \$47.35 million

### Multiplier Impacts

	<b>Supplier Sales</b> \$158.56 million
	<b>Income Re-spending</b> \$308.20 million

### Total Impacts

	<b>Jobs:</b> 10,729
	<b>Payroll:</b> \$550.11 million
	<b>Value Added:</b> \$816.49 million
	<b>Business Revenues:</b> \$1.63 billion



# ECONOMIC IMPACT OF AVIATION IN WEST VIRGINIA'S SENATE DISTRICT 16



The economic contribution of aviation in West Virginia can be seen in each of the state's 17 Senate Districts. The airports within each district are unique and serve different types of users and experience varying levels of activity. Senate District 16 does not technically have a West Virginia system airport within its boundaries. However, the proximity of a busy GA airport in District 15 warrants consideration of the airport's economic impact flowing into District 16. The airport impacting the economy of District 16 is highlighted here, including the jobs, payroll, value added, and business revenues supported by the facility.



**Eastern West Virginia Regional/Shepherd Field (MRB)** is a busy GA airport located in Martinsburg with an 8,815' runway. The airport has more based aircraft than any other airport in the state, offers a Federal Aviation Administration (FAA)-certified Part 135 charter service under the named "MRB Aviation" and provides a full-service fixed-base operator (FBO). MRB has the longest and widest runway in the state, meaning it can accommodate some of the world's largest aircraft and frequently supports military training visits. MRB is the only airport in the state with an on-airport Foreign Trade Zone, and is home to two flight training companies, one which is FAA-certified Part 141. Additionally, the airport hosts 167<sup>th</sup> Airlift Wing, the largest Air National Guard base in the state. Other activities supported by the airport include:

- ▲ Corporate/Business Activity
- ▲ Medical Transport/Evacuation
- ▲ Location of Community Facilities

*Aerial airport photo courtesy of the Civil Air Patrol*



Activity occurring at the airport impacting District 16 supports more than 2,000 jobs, generating over \$90.5 million in payroll each year. Additionally, the airport supports roughly \$110 million in value added and more than \$153.5 million in business revenues annually. The impacts reported for MRB in District 16 are the same impacts reported for MRB in District 15.

	Jobs	Payroll	Value Added	Business Revenues
<b>On-Airport Activity</b>	1,688	\$72,125,000	\$82,345,000	\$94,495,000
<b>Visitor Spending</b>	9	\$236,000	\$378,000	\$706,000
<b>Total Direct Impacts</b>	1,697	\$72,362,000	\$82,723,000	\$95,201,000
<b>Supplier Sales</b>	53	\$2,432,000	\$3,877,000	\$7,982,000
<b>Income Re-spending</b>	392	\$15,830,000	\$23,611,000	\$50,626,000
<b>Total Multiplier Impacts</b>	445	\$18,262,000	\$27,488,000	\$58,608,000
<b>Total</b>	<b>2,142</b>	<b>\$90,623,000</b>	<b>\$110,211,000</b>	<b>\$153,809,000</b>

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## APPENDIX F. STUDY PRIMER

Appendix F includes the West Virginia Aviation Economic Impact Study (WV AEIS) Primer. The Study Primer is an abbreviated version of the Executive Summary that presents key study findings and provides an overview of the study purpose and methodology.

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# Study Primer

West Virginia's public aviation system consists of 24 airports that support the safe transport of people and goods into and out of the state. These airports provide commercial airline and general aviation (GA) service connecting residents to thousands of destinations domestically and internationally and allowing out-of-state visitors access to the "Almost Heaven" offerings found across the Mountain State. Not only do airports provide essential connections for business and leisure travelers, but they also support key industries through the transportation of goods and materials. Airports are important economic anchors, serving as job centers and supporting top industries in West Virginia such as aerospace, tourism, mining, agriculture, manufacturing, and healthcare. Collectively, the operation of airports and spending by visitors arriving to the state via these airports generate significant economic activity.

To assess both the quantitative and qualitative impacts generated by this network of airports, the West Virginia Aeronautics Commission (WVAC) initiated the West Virginia Aviation Economic Impact Study (WV AEIS), using 2019 as the base year for assessment. This study, initiated in January 2020, identifies and documents the wide range of economic and other benefits the West Virginia aviation system annually contributes to the state.

## Methodology

To capture an accurate picture of the economic activity supported by aviation in the state, a comprehensive data set was required. These data were collected in several ways: in-person meetings; online surveying; phone calls; and more. Site visits were conducted at each of the 24 system airports to collect information on airport administration and activity, as well as contact information for airport tenants and aviation-reliant businesses who were subsequently surveyed. Additionally, two surveys were developed to capture visitor spending data to develop spending profiles – one for out-of-state passengers arriving via commercial service and one for out-of-state passengers arriving via GA. These data and information from supplementary sources, when necessary, were modeled using IMPLAN, an industry leading application approved by the Federal Aviation Administration (FAA) to calculate the system's economic contribution.

## State Impacts

Economic benefits are generated by on-airport activities including employment (e.g., airport administration and tenants) and capital improvements (e.g., construction). Economic impacts also are generated off-airport when money is spent by out-of-state visitors traveling to West Virginia via the state's 24 system airports, and when air cargo transported via these airports supports the operation of off-airport businesses.

This initial economic activity, known as direct impacts, generates additional impacts as money flows through the economy. These "multiplier" effects result when a portion of direct business revenues are used to purchase goods and services in West Virginia (called supplier sales) and payroll is re-spent within the state (called income re-spending).

Along with the annual impacts presented in the figure below, direct impacts from on-airport activities and visitor spending also generate \$75.5 million in tax impacts annually.

## Key data points collected:

- ▲ Top airport activities
- ▲ Revenues
- ▲ Airport-sponsored employment
- ▲ Airport visitors and spending profiles
- ▲ Outsourced or contracted employment
- ▲ On-airport tenants
- ▲ Capital improvements
- ▲ Businesses that base aircraft or rely on WV airports
- ▲ Other expenditures
- ▲ Impacts of Coronavirus Disease 2019 (COVID-19)

## Economic Impact Indicators

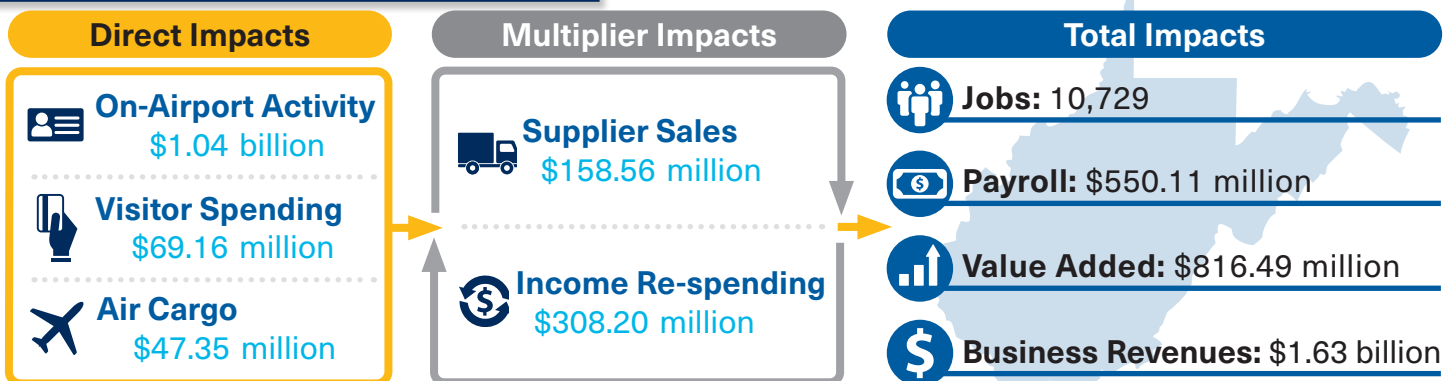
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**Business Revenues:** An airport's total aviation-supported output including the sum of business sales and budget expenditures

## Statewide Economic Impacts



## Using the Results

The WV AEIS documents the economic contribution of aviation at the local (airport), regional, and statewide levels to provide a comprehensive picture in different geographic contexts. Additionally, findings are separated between direct impacts and multiplier impacts (supplier sales and income re-spending) to clearly distinguish the source of impact. Not only are the study findings useful to the WVAC and FAA, but they also can be used locally by airports in communicating their value and need for continued support from their local communities and decision makers.

The table below presents total annual impacts by airport in descending order of business revenues.

Associated City	Airport Name	FAA ID	Jobs	Payroll	Value Added	Business Revenues
Clarksburg	North Central West Virginia	CKB	2,345	\$168,177,000	\$295,704,000	\$775,448,000
Charleston	Yeager	CRW	2,940	\$106,150,000	\$146,871,000	\$225,306,000
Parkersburg	Mid-Ohio Valley Regional	PKB	1,050	\$80,400,000	\$102,191,000	\$153,963,000
Martinsburg	Eastern West Virginia Regional/Shepherd Field	MRB	2,142	\$90,623,000	\$110,211,000	\$153,809,000
Huntington	Tri-State/Milton J. Ferguson Field	HTS	471	\$21,614,000	\$32,459,000	\$61,927,000
Lewisburg	Greenbrier Valley	LWB	365	\$15,260,000	\$26,652,000	\$50,505,000
Morgantown	Morgantown Municipal - Walter L. Bill Hart Field	MGW	293	\$13,184,000	\$20,226,000	\$41,782,000
Beckley	Raleigh County Memorial	BKW	141	\$6,452,000	\$9,352,000	\$18,033,000
Elkins	Elkins-Randolph County - Jennings Randolph Field	EKN	122	\$5,561,000	\$8,192,000	\$14,709,000
Cumberland	Greater Cumberland Regional	CBE	81	\$2,978,000	\$4,409,000	\$8,996,000
Wheeling	Wheeling Ohio County	HLG	74	\$2,914,000	\$4,183,000	\$8,273,000
Buckhannon	Upshur County Regional	W22	48	\$2,781,000	\$3,908,000	\$8,012,000
Ravenswood	Jackson County	I18	53	\$2,896,000	\$3,857,000	\$7,658,000
Moundsville	Marshall County	MPG	51	\$3,279,000	\$4,226,000	\$7,645,000
Bluefield	Mercer County	BLF	74	\$2,545,000	\$3,881,000	\$7,564,000
Logan	Logan County	6L4	29	\$1,231,000	\$1,839,000	\$3,650,000
Fairmont	Fairmont Municipal - Frankman Field	4G7	13	\$549,000	\$924,000	\$2,447,000
Petersburg	Grant County	W99	17	\$435,000	\$667,000	\$1,466,000
Philippi	Philippi/Barbour County Regional	79D	9	\$408,000	\$542,000	\$876,000
Point Pleasant	Mason County	3I2	6	\$274,000	\$420,000	\$711,000
Sutton	Braxton County	48I	4	\$61,000	\$87,000	\$253,000
Williamson	Appalachian Regional	EBD	2	\$37,000	\$52,000	\$168,000
Pineville	Kee Field	I16	2	\$64,000	\$85,000	\$141,000
Summersville	Summersville	SXL	-	\$7,000	\$19,000	\$43,000

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## Qualitative Impacts

The total value and contribution of West Virginia's airports exceeds the monetary impact presented here. To better understand the ways in which West Virginians rely or benefit from air transportation, the WV AEIS includes a collection of real-life stories and experiences from a wide range of perspectives – a few of which are summarized here.

### Medical

Emergency and non-emergency aviation medical operations occur daily, providing essential health services to communities across the state. Medical operations include emergency patient transport, organ donation transport, and transportation of doctors or medical supplies. Almost all system airports experience these activities, and some are home to aeromedical companies who base staff and aircraft at their facilities, ready to take flight at a moment's notice.



### Military

West Virginia's Air National Guard and Army National Guard rely on airports in the state to conduct necessary training, provide cargo and freight shipment services, and for transporting service men and women to and from their missions. These military entities respond to natural and man-made disasters and protect the residents of West Virginia. Some members of the guard spend over 1,200 hours annually piloting Black Hawk helicopters on various missions.



### Industry Advancement

Airports, post-secondary education institutions, and other entities like the Mid-Atlantic Aerospace Complex (MAAC) support a strong aviation industry through a variety of educational and employment opportunities. As an example, multiple FAA-certified pilot and mechanic programs are offered at West Virginia airports, creating a pipeline of aviation professionals needed to support industry advancement.

