



# VIRGINIA AIRPORT SYSTEM ECONOMIC IMPACT STUDY

## EXECUTIVE SUMMARY



## The Economic Importance of Virginia's Airports

The Commonwealth of Virginia's diverse system of airports plays a vital role in the state and regional economies by creating jobs and contributing to overall economic development. In addition, airports in Virginia serve as a gateway to the nation's air transportation system and the world's economy.

The Virginia Department of Aviation (DOAV) has undertaken this statewide economic impact study to identify the economic benefits associated with nine commercial service and 57 general aviation airports that serve communities throughout Virginia. This study focuses on the economic benefits created by Virginia's airports, the visitors who travel through the airports and the in-state companies that rely on the airports to support and conduct their business.



# Economic Benefits of Virginia's Airports

Virginia's system of 66 public-use airports provides the Commonwealth with a safe and efficient means of transportation as well as stimulates economic growth and development. By providing aviation-related services, the system supports more than a quarter million jobs and generates billions of dollars in economic activity while meeting the air travel needs of Virginia residents, businesses and visitors.

- Virginia's airports contribute \$28.8 billion in economic activity to the Virginia economy, which represents 4.4% of the state's total economic output.
- Approximately 259,000 jobs are created and sustained by Virginia airports. This represents 5.5% of total jobs in Virginia.
- \$11.1 billion in payroll is realized as a result of jobs created by Virginia airports.
- More than 69,000 people each day board commercial aircraft in Virginia.
- On a daily basis, over 6,000 aircraft take-off from and land at Virginia airports.
- Each day, approximately 23,000 visitors arrive in the state by commercial airline or general aviation aircraft.
- Each job at Virginia's airports supports an additional seven jobs in the state.
- Every \$1 spent at a Virginia airport contributes an additional \$3.48 in economic activity for Virginia.

**Jobs**  
**259,000**

**Payroll**  
**\$11.1 Billion**

**Economic Activity**  
**\$28.8 Billion**



# Virginia Airports Make Significant Contributions

Airports are essential components of the state's infrastructure for moving people and goods, facilitating commerce and maintaining a high quality-of-life for Virginia's residents.

## Businesses and Residents Depend on Airports

Companies of all sizes, from major employers to small businesses, depend on Virginia's airports for the fast and efficient transportation of personnel, supplies and products. Residents and visitors rely on Virginia's airports for comfortable and convenient travel to and from cities across the U.S. and the world.

## Air Transportation Brings Tourists to Virginia

Tourism, another important contributor to Virginia's economy, relies on commercial and general aviation to transport millions of visitors annually to the state's tourist destinations, including theme parks, state parks, scenic byways, historical sites and beaches.

## Airports Create Economic Benefits for All Virginians

The economic benefits of airports extend well beyond the boundaries of airports. Even residents who may never fly benefit from airports through the ancillary creation of businesses, jobs, income and tax revenues.

## Airports Enrich the Quality-of-Life for Virginia Residents

Airports also produce value and intangible benefits that are difficult to quantify. Communities throughout Virginia rely on airports for essential services such as overnight delivery services, air ambulance services, aerial applications, traffic monitoring and law enforcement. Airports also enhance quality-of-life by providing educational and recreational opportunities, such as pilot training, air shows, ballooning, sightseeing and other types of recreational flying.



Angel Flight Mid-Atlantic



Richard Nowitz, Alexandria CVA



# Summary of Economic Impact

The economic contributions of each Virginia airport are measured in terms of jobs, payroll and economic activity.

**Jobs** represent the total number of individuals employed, including both part- and full-time positions.

**Payroll** is the annual salary, wages and benefits for employees, including all taxes.

**Economic Activity** includes annual gross sales for commercial firms and budget expenditures for government or non-profit entities.

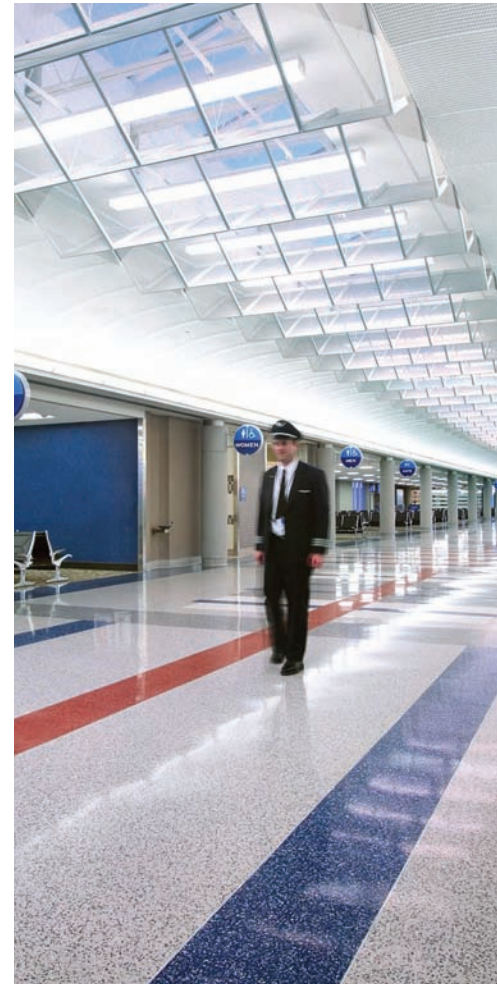
## Total Economic Impacts of Airports on the Virginia Economy

	Jobs	Payroll (thousands)	Economic Activity (thousands)
Commercial Airports (Large & Medium Hub) <sup>1</sup>	179,655	\$7,362,400	\$17,448,173
Commercial Airports (Small & Non-Hub) <sup>2</sup>	29,181	\$951,098	\$3,011,637
General Aviation Airports	5,154	\$213,350	\$728,102
Airport Dependent Businesses <sup>3</sup>	45,006	\$2,605,025	\$7,612,612
<b>Total Economic Impacts of Virginia Airports</b>	<b>258,996</b>	<b>\$11,131,873</b>	<b>\$28,800,524</b>

<sup>1</sup> Includes Washington Dulles International and Ronald Reagan Washington National airports. Economic impacts for the Washington airports are based on the *Metropolitan Washington Airports Authority, Technical Report: Economic Impact Study – 2009*, prepared by the Louis Berger Group, 2010.

<sup>2</sup> Includes Charlottesville-Albemarle, Lynchburg Regional, Newport News-Williamsburg International, Norfolk International, Richmond International, Roanoke Regional and Shenandoah Valley Regional airports.

<sup>3</sup> Airport dependent businesses rely on Virginia’s airports for shipping or receiving goods, traveling to business and client sites, or for specialized airport services and facilities such as free trade zones, U.S. Customs and U.S. Immigration and Naturalization Services.



Chris Cunningham/RIC



Chris Cunningham/RIC

# How Economic Impact is Measured

The contribution of airports to the Virginia economy was calculated from data collected through a comprehensive survey of airport managers, on-airport tenants, visitors and off-airport businesses in Virginia, as well as data from U.S. government agencies and IMPLAN, a widely accepted economic modeling system. The study reflects the Federal Aviation Administration's (FAA) recommended methods and guidelines for estimating the economic impacts of airports and followed the procedures established by the Economic Impact Research Consortium (EIRC).<sup>1</sup>

<sup>1</sup> The EIRC was developed by the Performance Management Group at Virginia Commonwealth University in collaboration with the College of William & Mary, George Mason University, Old Dominion University, University of Virginia, Virginia Department of Planning and Budget, Virginia Economic Development Partnership, Virginia Employment Commission and Virginia Tech.



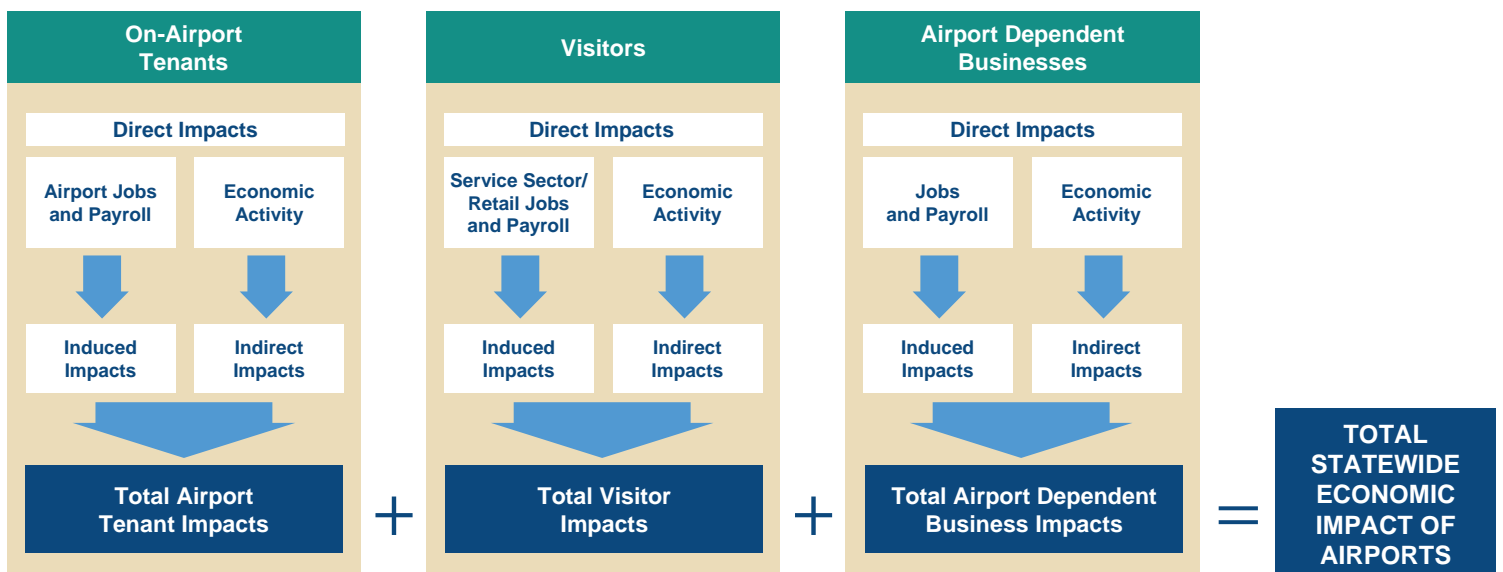
**Economic impacts for all airports were classified into three impact categories: direct, indirect and induced. The total economic impact of airports is the sum of these categories.**

**Direct Impacts** stem from the activity that is directly related to the provision of air services, visitor spending or the activities of airport dependent businesses.

**Indirect Impacts** are the business to business transactions that occur as a result of off-airport purchases made by airport tenants, airport-dependent businesses and the businesses that air visitors patronize.

**Induced Impacts** are realized when workers employed on airports or whose jobs are supported by businesses that serve visitors or airport dependent businesses, spend their earnings in their local communities.

Indirect and Induced impacts capture the flow of direct transactions throughout the Virginia economy through successive rounds of spending. Together these impacts are known as the **"multiplier effect."**



# On-Airport Tenants

Virginia’s on-airport tenants and businesses create \$10 billion in economic activity.

On-airport tenants and businesses create jobs and purchase goods and supplies from other Virginia businesses which create and support additional jobs in other sectors of the state’s economy. Examples of on-airport tenants and businesses include: airlines, air-taxi operators, air ambulance operators, air charter companies, aircraft sales and management companies, airport management, corporate flight departments, fixed based operators (FBOs), ground transportation operators, local and state government agencies, rental car agencies, retail concessions, the Transportation Security Administration (TSA) and others.

■ Employees of on-airport tenants and businesses earn an average annual salary of \$56,000.

## Annual Economic Impacts of On-Airport Tenants and Businesses

	Jobs	Payroll (thousands)	Economic Activity (thousands)
Commercial Airports (Large & Medium Hub)	45,336	\$2,418,400	\$8,318,577
Commercial Airports (Small & Non-Hub)	8,044	\$314,363	\$1,109,484
General Aviation Airports	3,559	\$167,869	\$592,710
<b>Total Impacts of On-Airport Tenants and Businesses</b>	<b>56,939</b>	<b>\$2,900,632</b>	<b>\$10,020,771</b>



# Visitor Spending

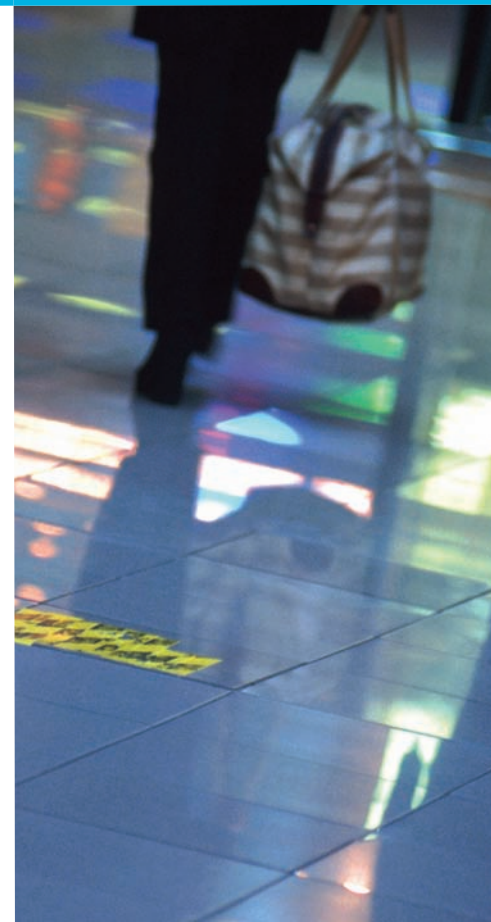
Spending by visitors creates an additional \$11.2 billion in economic activity.

Millions of visitors use air transportation to travel to Virginia each year to conduct business, vacation and visit with friends and families. After arriving, these visitors spend money for lodging, food, local transportation, entertainment, retail and other goods and services. Visitor spending in turn supports jobs and produces additional economic activity throughout the state.

- In 2010, approximately 8.5 million visitors arrived in Virginia through one of the Commonwealth's 66 public-use airports.
- Visitors that arrive in Virginia by air transportation spend an average of \$747 per person during their stay.

## Annual Economic Impacts of Visitors

	Jobs	Payroll (thousands)	Economic Activity (thousands)
Commercial Airports (Large & Medium Hub)	134,319	\$4,944,000	\$9,129,596
Commercial Airports (Small & Non-Hub)	21,137	\$636,735	\$1,902,153
General Aviation Airports	1,595	\$45,481	\$135,392
<b>Total Impacts of Visitors</b>	<b>157,051</b>	<b>\$5,626,216</b>	<b>\$11,167,141</b>



Bill Crabtree, Jr., VTC



# Airport Dependent Businesses

The activities of off-airport companies that depend on Virginia’s airports to conduct business generate \$7.6 billion in sales benefitting the Virginia economy.

Many companies throughout Virginia rely on airports to conduct commerce. This study considered the economic impact created by off-airport businesses that are dependent on airport services to meet their business travel needs and to ship and receive goods and materials. Examples include retailers that ship their products from one of Virginia’s airports or manufacturers that receive their production inputs “just-in-time” through overnight delivery services. These businesses would be adversely impacted if the airport were not available.

- The economic activity of Virginia businesses that rely on airports sustains as many as 45,000 jobs in the Commonwealth.
- The average salary for Virginia residents employed at airport dependent businesses is approximately \$59,000.

## Annual Economic Impacts of Airport Dependent Businesses

	Jobs	Payroll (thousands)	Economic Activity (thousands)
<b>Total Impacts of Airport Dependent Businesses</b>	<b>45,006</b>	<b>\$2,605,025</b>	<b>\$7,612,609</b>

Note: Data includes impacts of airport dependent businesses that responded to the study surveys.



# Virginia's Airport System

Virginia's economy benefits from a diverse system of nine commercial service airports and 57 general aviation airports.

## Airport Classifications

The Virginia airport system consists of 66 airports, including the Washington Dulles International and Ronald Reagan Washington National airports. The Virginia Air Transportation System Plan (VATSP) classifies the airports into five categories based on their role in the overall system:

**1. Commercial Service:** These airports provide scheduled airline services (air carrier or regional/commuter services) and accommodate at least 10,000 annual passenger enplanements.

**Virginia's nine Commercial Service airports create nearly 209,000 jobs in the Commonwealth and \$20.5 billion in economic activity.**

**2. Reliever:** Reliever airports are general aviation airports located in metropolitan areas that serve to reduce congestion at nearby commercial service airports by providing comparable landside and airside facilities to general aviation operators.

**Virginia's eight Reliever airports contribute approximately 2,800 jobs and \$454 million in economic activity to the state economy.**

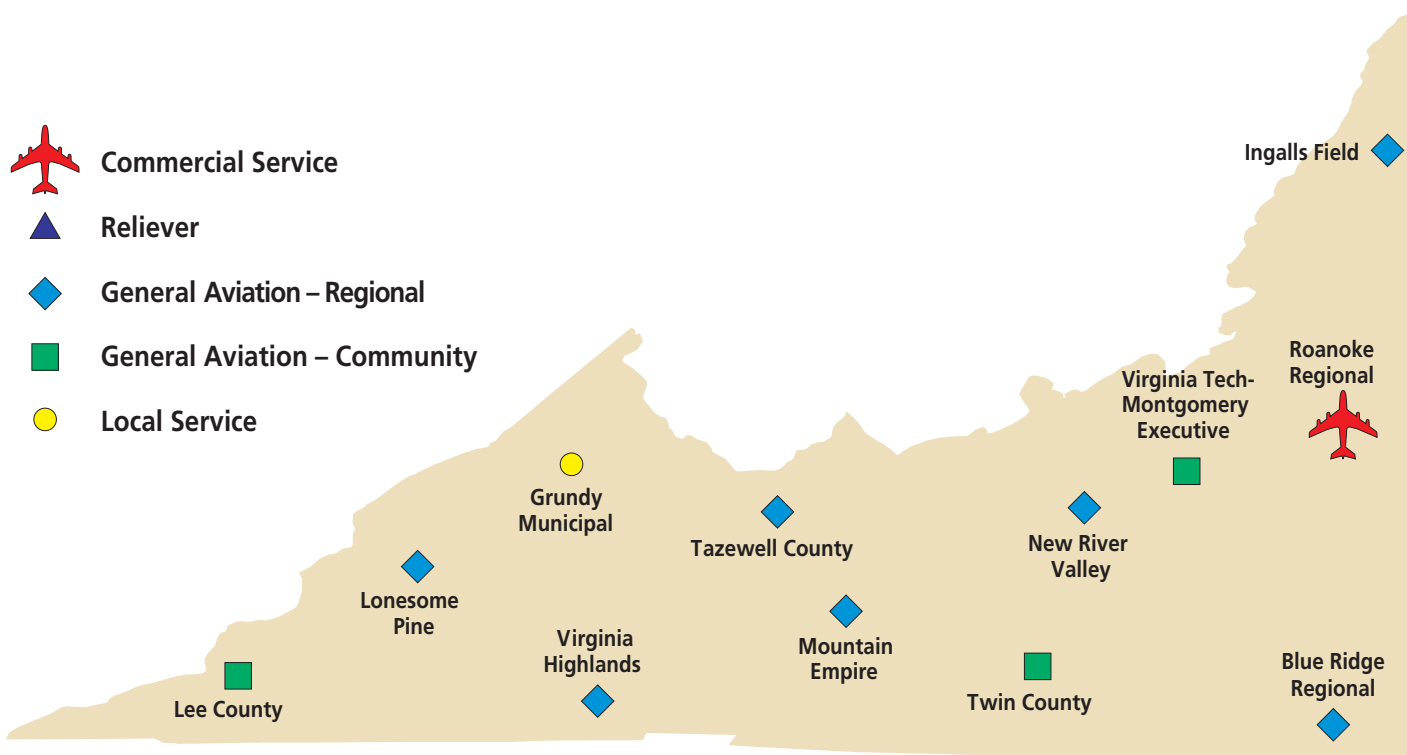
**3. General Aviation Regional:** These airports serve large geographic areas and are often the only airport facilities in the

region. General Aviation Regional airports serve the needs of businesses as well as recreational users by offering services and amenities such as jet fuel, instrument approaches, FBO services and aircraft hangars. **Virginia's 18 General Aviation Regional airports generate nearly 1,100 jobs and \$109 million in economic activity.**

**4. General Aviation Community:** These airports serve the needs of businesses and recreational users but often serve a more limited market area than the regional airports. They provide services such as aircraft rentals, flight instruction and AvGas fuel. **Virginia's 17 General Aviation Community airports create 600 jobs and \$56 million in economic activity.**

**5. Local Service:** The Local Service airports provide limited general aviation services and accommodate comparatively low levels of activity. Many of the Local Service airports have aeronautical, physical, environmental, or political constraints that limit their expansion. **Virginia's 14 Local Service airports contribute more than 700 jobs and \$110 million in economic activity.**<sup>11</sup>

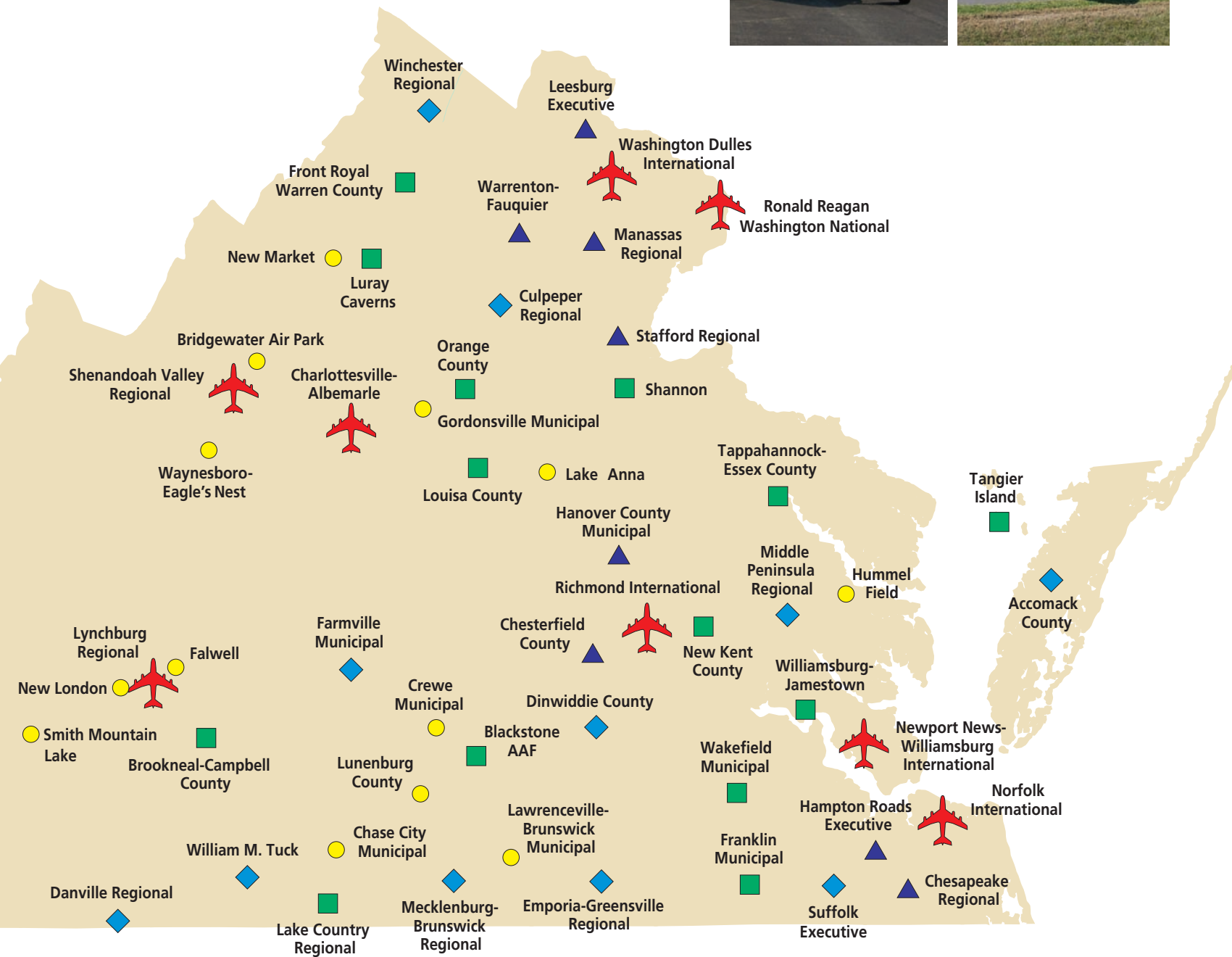
<sup>11</sup> A single on-airport tenant at one of Virginia's Local Service airports employs more than 200 people.





■ In 2010, 25.3 million passengers boarded commercial airline flights in Virginia.

■ Virginia's general aviation airports accommodated nearly 1 million aircraft operations in 2010.



# Commercial Service Airports

Virginia's commercial service airports account for 71% of the total economic activity of the Commonwealth's airport system.

- Ronald Reagan Washington National and Washington Dulles International airports are major contributors of economic benefits, and together they created \$17.5 billion in economic activity in Virginia. Other commercial service airports in Virginia were the source of \$3 billion of economic activity.
- Virginia's commercial service airports generated \$9,330 of economic activity for every aircraft take-off and landing.
- In 2010, Virginia's commercial service airports contributed \$20.5 billion in economic activity, which supported 208,800 jobs with an annual payroll in excess of \$8.3 billion.

## Total Annual Economic Impacts of Virginia's Commercial Service Airports

	Jobs	Payroll (thousands)	Economic Activity (thousands)
Charlottesville-Albemarle	1,267	\$40,667	\$128,684
Lynchburg Regional	911	\$29,801	\$109,190
Newport News-Williamsburg International	3,382	\$114,084	\$373,558
Norfolk International	10,269	\$341,444	\$1,075,242
Richmond International	10,910	\$350,280	\$1,082,614
Roanoke Regional	2,189	\$68,094	\$216,151
Shenandoah Valley Regional	252	\$6,728	\$26,198
Washington Dulles International <sup>11</sup>	96,980	\$3,991,000	\$10,123,254
Ronald Reagan Washington National <sup>11</sup>	82,675	\$3,371,400	\$7,324,919
<b>Total Economic Impacts – Commercial Service Airports</b>	<b>208,835</b>	<b>\$8,313,498</b>	<b>\$20,459,810</b>

<sup>11</sup> Metropolitan Washington Airports Authority, Technical Report: Economic Impact Study – 2009, prepared by the Louis Berger Group, October, 2010

Results for the two Washington airports were calculated in a separate study conducted for the Metropolitan Washington Airports Authority (MWAA). The results shown for the Washington airports represent the "Virginia share" of the multi-state economic impacts of these airports. The MWAA study measured economic benefits in terms of jobs and payroll, but not economic activity. To maintain consistency with the findings in the DOAV study, economic activity and related indirect and induced impacts for the Washington airports were estimated from the statewide findings reported in the MWAA study.



# General Aviation Airports

Virginia's general aviation airports contribute \$728 million in economic activity.

General aviation airports make important contributions to economic development for the Commonwealth and for the local communities they serve. In addition to economic benefits, the system of airports provides numerous critical services to enhance the quality of life, health, safety and welfare of

Virginia citizens. In 2010, Virginia's public-use general aviation airports contributed \$728 million in economic activity to the state economy and they were directly or indirectly responsible for nearly 5,200 jobs with an annual payroll of more than \$213 million.

- Virginia's general aviation airports produce \$722 of economic activity for every aircraft take-off and landing.

## Total Annual Economic Impacts of Virginia's General Aviation Airports

	Jobs	Payroll (thousands)	Economic Activity (thousands)
Accomack County	32	\$700	\$2,378
Blackstone AAF	15	\$202	\$671
Blue Ridge Regional	59	\$1,314	\$5,196
Bridgewater Air Park	565	\$18,425	\$85,141
Brookneal-Campbell County	4	\$159	\$642
Chase City Municipal	3	\$77	\$454
Chesapeake Regional	182	\$6,309	\$21,672
Chesterfield County	239	\$7,900	\$27,801
Crewe Municipal	4	\$135	\$441
Culpeper Regional	108	\$3,097	\$9,737
Danville Regional	72	\$1,912	\$6,832
Dinwiddie County	75	\$2,995	\$10,338
Emporia-Greenville Regional	16	\$379	\$1,290
Falwell	53	\$2,059	\$9,110
Farmville Municipal	44	\$1,158	\$3,601
Franklin Municipal	19	\$595	\$2,466
Front Royal-Warren County	45	\$1,161	\$4,591
Gordonsville Municipal	11	\$354	\$1,116
Grundy Municipal	4	\$133	\$530
Hampton Roads Executive	237	\$8,814	\$29,397
Hanover County Municipal	191	\$8,377	\$29,363
Hummel Field	23	\$1,688	\$5,649
Ingalls Field	10	\$285	\$928
Lake Anna	2	\$78	\$245
Lake Country Regional	4	\$109	\$553
Lawrenceville-Brunswick Municipal	5	\$47	\$229
Lee County	7	\$181	\$717
Leesburg Executive	634	\$32,741	\$78,060
Lonesome Pine	26	\$690	\$2,241
Louisa County	50	\$1,493	\$4,756

	Jobs	Payroll (thousands)	Economic Activity (thousands)
Lunenburg County	2	\$75	\$470
Luray Caverns	23	\$392	\$1,423
Manassas Regional	1,056	\$69,873	\$234,610
Mecklenburg-Brunswick Regional	34	\$633	\$2,717
Middle Peninsula Regional	93	\$2,085	\$7,030
Mountain Empire	31	\$649	\$2,884
New Kent County	36	\$1,144	\$3,884
New London	15	\$484	\$1,794
New Market	17	\$650	\$2,621
New River Valley	67	\$1,690	\$5,928
Orange County	104	\$1,848	\$5,711
Shannon	83	\$3,044	\$11,832
Smith Mountain Lake	5	\$153	\$598
Stafford Regional	107	\$4,440	\$18,408
Suffolk Executive	136	\$4,412	\$15,301
Tangier Island	11	\$215	\$654
Tappahannock-Essex County	17	\$454	\$1,522
Tazewell County	12	\$263	\$1,033
Twin County	14	\$397	\$1,349
Virginia Highlands	70	\$2,217	\$7,572
Virginia Tech-Montgomery Executive	70	\$1,982	\$9,404
Wakefield Municipal	17	\$383	\$1,531
Warrenton-Fauquier	131	\$4,341	\$14,362
Waynesboro-Eagle's Nest	13	\$326	\$1,117
William M. Tuck	22	\$463	\$1,580
Williamsburg-Jamestown	62	\$1,288	\$4,084
Winchester Regional	168	\$5,882	\$22,538
<b>Total Economic Impacts-General Aviation Airports</b>	<b>5,155</b>	<b>\$213,350</b>	<b>\$728,102</b>

## Virginia Department of Aviation

### Our Vision

The Virginia Department of Aviation will be the standard of excellence amongst state aviation agencies.

We will make the Virginia aviation system the model air transportation system, providing Virginia communities economic development opportunities and convenient access to the national air transportation system.

### Our Mission

Cultivate an advanced aviation system that is safe, secure and provides for economic development.

Promote aviation awareness and education.

Provide the safest and most efficient flight services for the Commonwealth leadership and state agencies.







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