South Carolina
THE ECONOMIC IMPACT OF Aviation
January 2006
Presented by: Wilbur Smith Associates
Study Purpose

Quantify and explain the economic value of aviation in South Carolina
Study Objectives

- Quantify economic impact of:
  - Commercial service airports
  - General aviation airports
  - Military airfields

- Compare impact change to 1990 study

- Quantify aviation-related taxes
  - Aviation property & fuel sales
  - Income tax
Impact Levels, Types & Measures

• 3 Levels
  – Commercial, General Aviation, Military

• 3 Types
  – Direct, Indirect, Multiplier

• 3 Measures
  – Jobs (FTE)
  – Earnings ($ Payroll)
  – Output ($ Economic Activity)
Three Impact Types (and Measures)

DIRECT IMPACTS
- Airline Ops.
- Fixed Base Ops
- Flight/Ground
- Gov’t Oper.
- Air Taxi/Charter
- Helicopter Oper.
- Corporate Oper.

INDIRECT IMPACTS
- Commercial Visitors
- Gen. Aviation Visitors
- Corporate Visitors

MULTIPLIER IMPACTS
- Suppliers to Aviation
- Re-spending of Money

TOTAL IMPACTS
- Economic Activity
- Earnings
- Jobs
Economic Impact Estimation

• Direct Impacts
  – Survey airport management and tenants

• Indirect Impacts
  – Survey commercial service passengers
  – Survey general aviation pilots, passengers

• Multiplier (secondary) Impacts
  – IMPLAN multipliers

• Total Impacts
Aviation Activity in South Carolina

• 3.2 million commercial enplanements
  – 1.8 million commercial visitors (56%)
• 0.8 general aviation visitors
• 0.4 billion pounds of mail and cargo
Economic Impact of Aviation in SC

- Over 65,500 employees
  - Nearly 2.8% of the State’s workforce
- Over $1.9 billion in payroll
- Over $4.3 billion in output (economic activity)
Total Jobs by Impact Type

- Multiplier, 25,315
- Direct, 19,515
- Indirect, 20,703

Economic Impact of Aviation in South Carolina
Total Job Impacts by Activity

- Commercial, 40,871
- Military, 19,495
- General Aviation, 5,167
## Job Impacts by Activity & Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Commercial</th>
<th>General Aviation</th>
<th>Military</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>4,093</td>
<td>2,297</td>
<td>13,125</td>
<td>19,515</td>
</tr>
<tr>
<td>Indirect</td>
<td>20,148</td>
<td>555</td>
<td>0</td>
<td>20,703</td>
</tr>
<tr>
<td>Multiplier</td>
<td>16,630</td>
<td>2,315</td>
<td>6,370</td>
<td>25,315</td>
</tr>
<tr>
<td>Total</td>
<td>40,871</td>
<td>5,167</td>
<td>19,495</td>
<td>65,533</td>
</tr>
</tbody>
</table>

**Economic Impact of Aviation in South Carolina**
Grand Strand Airport

• One Asphalt Runway 5,996’ x 100’

• Aircraft Operations
  – Air Taxi 1,500
  – GA - Itinerant 20,000
  – GA - Local 11,500
  Total Operations 33,000

• Based Aircraft
  – Single Engine 45
  – Multi-Engine 5
  – Jet Engine 2
  – Helicopter 1
  Total Based Aircraft 53
Grand Strand - Direct Impacts

• Services/Activities
  – Flight Training
  – Aerial Advertising
  – Aircraft Maintenance
  – Aircraft Charter

• Direct Impacts (at-airport)
  – Jobs 45
  – Payroll $1,147,300
  – Expenses $3,452,500
Grand Strand – Indirect Impacts

- 21,500 itinerant & air taxi operations
  - 90% Visiting
  - 3.0 People/aircraft
- 29,000 visitors
  - 80% Day Only
    - @ $30/day
  - 30% Overnight
    - @ $75/day
    - @ 4.0 days
- $2,438,100 in visitor expenditures (off-airport)
Grand Strand – Total Impacts

<table>
<thead>
<tr>
<th>ECONOMIC IMPACT</th>
<th>DIRECT IMPACTS</th>
<th>INDIRECT IMPACTS</th>
<th>MULTIPLIER IMPACTS</th>
<th>TOTAL IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airline Ops.</td>
<td>$3,452,500</td>
<td>$2,438,100</td>
<td>$4,228,100</td>
<td>Economic Activity $10.1 Million</td>
</tr>
<tr>
<td>Fixed Base Ops</td>
<td></td>
<td></td>
<td></td>
<td>Earnings $3.6 Million</td>
</tr>
<tr>
<td>Flight/Ground</td>
<td></td>
<td></td>
<td></td>
<td>Jobs 137</td>
</tr>
<tr>
<td>Gov't Oper.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Taxi/Charter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicopter Oper.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Oper.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gen. Aviation Visitors
Corporate Visitors

Suppliers to Aviation
Re-spending of Money
Job Impact Change

Economic Impact of Aviation in South Carolina
Job Impact Change – Civil Aviation

- General Aviation: 4,206 to 5,167 (87% increase)
- Commercial: 20,386 to 40,871

Economic Impact of Aviation in South Carolina
Qualitative SC Airport Benefits

- Emergency Medical
- Police & Fire Support
- Wildfire Control
- Military and Government
- Pest & Wildlife Control

- Traffic & News Reporting
- Weather Forecasting
- Agricultural Activities
- Entertainment
- Community Events
Aviation-Related Tax Revenue

- Income associated w/ Jobs & Payroll
- Aircraft Property Tax
  - Commercial (State-Levied)
  - General Aviation (County Levied)
- Aviation Fuel Tax
  - AvGas
  - Jet fuel
Aviation Related Tax Revenue ($Million)

- GA Property, $9.4
- Income, $55.7
- Commercial Property, $7.3
- Jet Fuel, $1.6
- AvGas, $0.6

$73.6 Million in Annual Aviation-Related Taxes

Economic Impact of Aviation in South Carolina
$18.9 Million are directly related to aviation property and sales

Direct Aviation Related Tax Revenue

- GA Property, $9.4
- Commercial Property, $7.3
- Jet Fuel, $1.6
- AvGas, $0.6

Economic Impact of Aviation in South Carolina
**GA Aircraft Property Tax Calculation**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount/Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Value (Blue Book - low)</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Co. Property Tax Assessment Rate</td>
<td>10.5%</td>
</tr>
<tr>
<td>Assessed Value</td>
<td>$105,000</td>
</tr>
<tr>
<td>Co. Millage Rate</td>
<td>0.234</td>
</tr>
<tr>
<td>Aircraft Tax Assessment</td>
<td>$24,602</td>
</tr>
</tbody>
</table>

*Counties have option to lower Assessment Rate, and each county sets its own Millage Rate*

$9.4 million value based on actual county tax receipts collected from County Auditors
Comm. Aircraft Prop. Tax Calculation

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount/Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Value (Blue Book - low)</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>In-State Use Ratios</td>
<td></td>
</tr>
<tr>
<td>Flight Time (i.e., 100 days)</td>
<td>0.274</td>
</tr>
<tr>
<td>Land Time (i.e., 25 days)</td>
<td>0.068</td>
</tr>
<tr>
<td>Total Time (i.e., 125 days)</td>
<td>0.342</td>
</tr>
<tr>
<td>Aircraft Value based on Time in SC</td>
<td>$342,000</td>
</tr>
<tr>
<td>State Property Tax Assessment Rate</td>
<td>10.5%</td>
</tr>
<tr>
<td>Assessed Value</td>
<td>$35,910</td>
</tr>
<tr>
<td>State Millage Rate</td>
<td>0.281</td>
</tr>
<tr>
<td>Aircraft Tax Assessment</td>
<td>$10,091</td>
</tr>
</tbody>
</table>

Economic Impact of Aviation in South Carolina
Comm. Aircraft Prop. Tax Revenue

Source: SC State Department of Revenue

Economic Impact of Aviation in South Carolina
Jet Fuel Tax Estimate

- Applies to GA aircraft only
- Consulted SC Dept. of Revenue
  - Does not track Jet Fuel Tax collections
  - Used Monthly Fuel Suppliers Report data
- Used SCDOA Fuel Sales Report Survey
- Consulted FBOs, SCDOR, SCDOA
Jet Fuel Estimate  
(Based on 2004 sales volume & prices)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Gallons</td>
<td>39,089,900</td>
</tr>
<tr>
<td>General Aviation Use (Gallons)</td>
<td>10,950,000</td>
</tr>
<tr>
<td>Price per Gallon</td>
<td>$3.00</td>
</tr>
<tr>
<td>Estimated General Aviation Fuel Sales ($)</td>
<td>$32,850,000</td>
</tr>
<tr>
<td>Tax per Gallon</td>
<td>$0.05</td>
</tr>
<tr>
<td>Estimated General Aviation Jet Fuel Tax Receipts</td>
<td>$1,642,500</td>
</tr>
</tbody>
</table>
# Anticipated Flow of Direct Aviation Related Taxes

## TAX SOURCE

<table>
<thead>
<tr>
<th>Tax Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Aviation Property Taxes</td>
<td>$9.4 million</td>
</tr>
<tr>
<td>Commercial Aircraft Property Taxes</td>
<td>$7.3 million*</td>
</tr>
<tr>
<td>General Aviation Jet Fuel Taxes</td>
<td>$1.6 million*</td>
</tr>
<tr>
<td>AvGas Taxes</td>
<td>$0.6 million</td>
</tr>
</tbody>
</table>

### Direct Aviation-Related Collections

$18.9 million

## TAX DISTRIBUTION

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returned to South Carolina Counties</td>
<td>$9.4 million</td>
</tr>
<tr>
<td>South Carolina General Fund</td>
<td>$7.3 million</td>
</tr>
<tr>
<td>State Aviation Fund*</td>
<td>$2.2 million</td>
</tr>
</tbody>
</table>

*As of July 1, 2005 gallons and prices – 12% of Direct Aviation-Related Tax Collections

*Averaged $3.7 million before Independence Air
Community Airport Brochure

Front Cover

Representative Aircraft

Airport Location

ECONOMIC IMPACT

THE ECONOMIC IMPACT OF
Charleston
International Airport

DIRECT IMPACTS AVIATION INDUSTRY BENEFITS
ECONOMIC ACTIVITY/OUTPUT QUALITATIVE BENEFITS
PAYROLL/EMPLOYMENT BENEFITS INDIRECT IMPACTS
JOBS/EMPLOYMENT OUTPUT VISITOR SPENDING

Economic Impact of Aviation in South Carolina
Community Airport Brochure

Aviation Benefits Everyone

There is a strong relationship between the South Carolina’s economic and aviation. The state’s network of airports is essential to the global market place. Airports in South Carolina have helped to both local and national growth and economic diversification. Airports support the state’s economy and they are also economic generators. Residents, businesses, and visitors rely on the airports systems to support health, wellness, and safety needs. South Carolina’s military infrastructure is also important to our national security.

South Carolina is served by a diversified system of airports. The state’s 6 commercial service and 14 general aviation airports are essential gateways to the state’s diversified business base, its growing population, and its burgeoning tourism industry. In addition, South Carolina is home to four busy military airports. Commercial aviation includes all scheduled public flights, charter flights, and flights flown by air cargo companies. All other flights by civilian aircraft are classified as general aviation. Operations by military aircraft constitute the remainder of the state’s annual aviation activity.

Methodology

A methodology approved by the Federal Aviation Administration (FAA) was used to estimate the economic impacts associated with South Carolina’s civilian airports and its State military activities. Airport-related economic impacts were identified for three categories: direct, indirect, and induced. Direct impacts are those associated with airport employment, business, and tourism. Direct impacts occur as a result of the provision of aviation services. Indirect impacts are those tied to spending by visitors who visit South Carolina through one of the public commercial or general aviation airports. As direct and indirect impacts are entered into the local, regional, and statewide economies, additional multiplier impacts are created. The economic impacts caused by the multiplier effect essentially add the benefits ultimately linked outside South Carolina. Multipliers that are specific to South Carolina were used to complete the economic impact analysis.

Total Economic Impact of South Carolina’s Airports

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment</td>
<td>65,533 Jobs</td>
</tr>
<tr>
<td>Total Payroll</td>
<td>$1.9 billion</td>
</tr>
<tr>
<td>Total Economic Activity</td>
<td>$4.3 billion</td>
</tr>
</tbody>
</table>

Economic Impact of Aviation in South Carolina

South Carolina also realizes additional spin-off benefits from aviation. When taxes on fuel, personnel, and license are considered, airports contribute significantly to the state’s economic base. In addition to the benefits listed above, South Carolina’s aviation industry has been a key component of the state’s economic growth. A strong aviation industry is essential to South Carolina’s economic well-being.

A strong airport system is essential to South Carolina. A strong airport system is essential to South Carolina’s economic well-being.
CHARLESTON INTERNATIONAL AIRPORT

Charleston International Airport is a joint-use commercial service airport and air force base that is owned and operated by the Charleston County Aviation Authority. The airport is located on the site of a former Lowcountry off of Interstate 95 in close proximity to SC 17, 52 and 58. Charleston International has two asphalt runways: Runway 10/28, 8,000 feet long by 200 feet wide, and Runway 3/21, 7,000 feet long by 150 wide.

The airport currently generates $30 million in direct output, of which $12 million is paid in approximately 3,000 full-time jobs. Additionally, more than 6,000 commercial aviation and 1,500 general aviation jobholders arrive at the airport each year, generating another $12 million in indirect aviation-related output. Including the multiplier effect, the airport creates and sustains in Charleston International Airport generates $30 million in total economic output, of which $15 million in payroll is paid to approximately 4,000 full-time equivalent jobs.

Regular airport activities include air passengers and cargo services, law enforcement, real estate (hotels, recreational flying, etc.), etc. In doing so, the airport provides commercial service access to South Carolina's Lowcountry and various services related to the health, welfare, and safety of the community. As one of the busiest commercial service airports in the state, Charleston International Airport provides vital support to the region's aviation and military sectors.

Currently, a new Boeing 787 Dreamliner fuselage production facility is under construction. The new state-of-the-art facility is a joint-venture between Boeing Aircraft International and Aeronca Aircraft that will employ an additional 700 people—featuring state-of-the-art equipment to maintain advanced manufacturing of completed fuselage sub-assemblies. It is anticipated that the facility will attract additional supplier-related jobs to South Carolina to support the production facility.

ECONOMIC IMPACT

**Benefit Measures:**
- Economic impacts are measured in terms of jobs, employment, payroll, earnings, and total annual economic activity or output.

**Jobs/Employment:**
- Thousands of jobs in South Carolina are created by businesses, workers, and others who rent or lease commercial space or general aviation aircraft at or in one of the four military airports. In addition, by attracting visitors who stay in South Carolina using one of the commercial service or general aviation airports supports additional employment.

**Payroll/Earnings:**
- Aviation in South Carolina supports an estimated 3,000 jobs. All of these jobs have annual salaries that contribute to the payroll/earnings benefits. It is estimated that 60 percent of the workers are nonmilitary and make up the largest share of the payroll/earnings benefits.

**Annual Economic Activity/Output:**
- Additional reported economic activity and related aviation activities often require the purchase of goods and services. Expenditures in this category are in addition to those identified in the other categories. These expenditures are represented as total annual economic activity or output.
Thank you for attending, and for your assistance with the South Carolina Aviation Economic Impact Study.