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**ECONOMIC IMPACT
OF MARYLAND'S
34 GENERAL AVIATION
AND COMMUTER AIRPORTS**



Maryland
Aviation
Administration

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The State of Maryland's Aviation System consists of 34 public use general aviation and commuter airports that serve the surrounding region in which each airport is located. The activity at these airports ranges from limited general aviation activity to scheduled commuter service, such as at the Salisbury-Ocean City Airport and the Hagerstown Regional Airport. Corporate general aviation tenants at Carroll County Airport and Frederick Municipal Airport use these airports to serve local industries, while flight schools provide pilot instruction. Other users of these airports include private, recreational pilots with aircraft based at the individual airports, and the military at Martin State Airport.

The activity at these airports generates jobs and personal income to those employed by airport tenants, as well as to local visitor industry firms serving commuter passengers using Hagerstown Regional and Salisbury-Ocean City Airports. Business revenue is received by the firms providing the services to the commercial airlines as well as to the general aviation aircraft, military aircraft, and to flight schools. These firms providing the service and the individuals employed by these firms also pay Federal, state, and local taxes.

Interviews were conducted with airport managers and the tenants located at each of the airports. A total of 354 interviews were conducted, accounting for 99 percent of airport tenants. Tenant sectors interviewed include but were not limited to fixed-base operators (FBOs), flight schools, maintenance and avionics providers, charter and commercial air carriers, freight airlines, rental cars, corporate aviation departments, and government agencies. Also included in the interview process were aviation-related firms such as pilots' organizations and aviation insurance providers.

The Maryland Aviation Administration initiated this study to measure the economic impact of airport activity generated by the 34 general aviation and commuter airports located throughout the State of Maryland. The base year of the analysis is fiscal year (FY) 2006. The economic impacts created by the airport and the state-wide system are measured in terms of jobs, personal income, state and local taxes, and revenue generated directly by airport activity.

In order to measure the impacts in the most defensible manner possible, the methodology utilized is based on interviews, local economic data, and airport statistics. Operational models of the 34 GA/commuter airports were developed to use in updating the impacts on a short term basis, and to measure the incremental changes in airport-generated impacts due to changes in such factors as changes in the number of flight operations or changes in aircraft mix (single-engine versus jet). Also, the model can be used to test the economic impacts of various capital investment and airport expansion projects.

Introduction, Overview, and Summary of Results

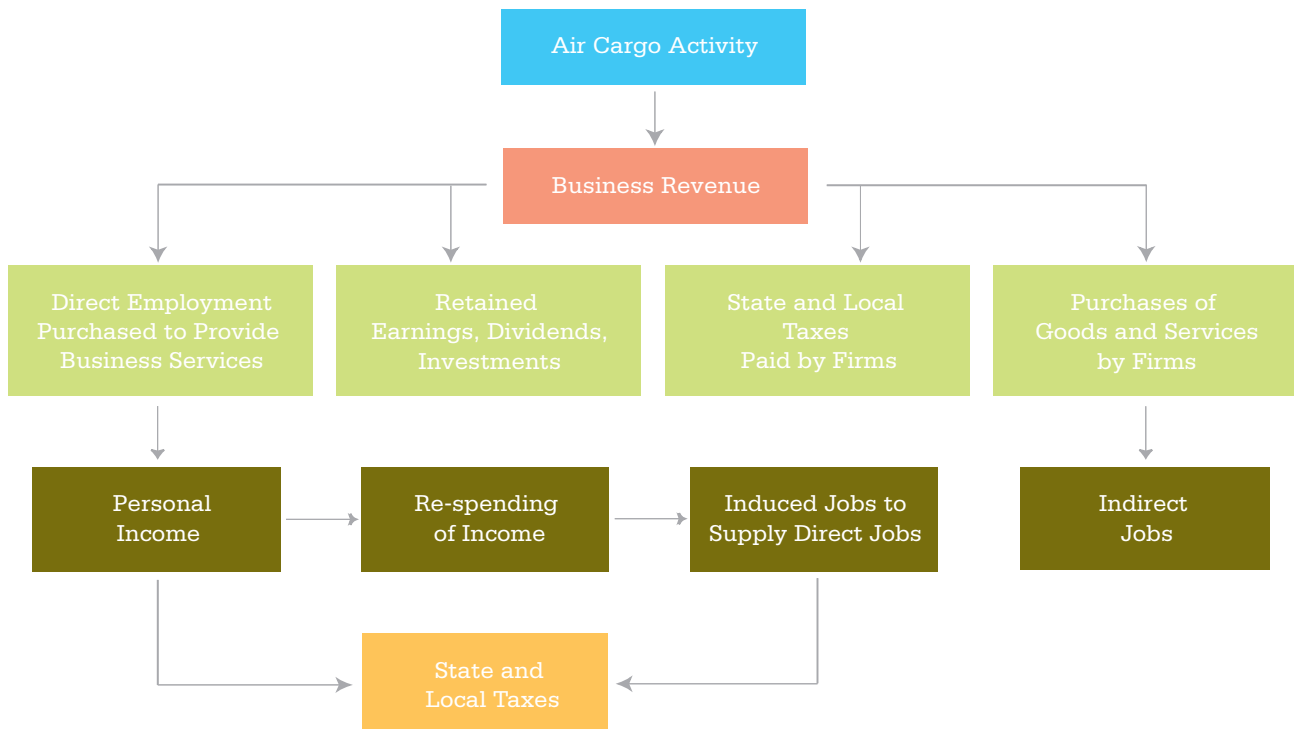
1. IMPACT STRUCTURE

Activity at a general/corporate/commuter airport contributes to the local and state economy by generating business revenue to local, regional and national firms providing passenger service, freight service and support services to the airport and its tenants. The firms providing these services include FBOs, maintenance/avionics providers, charter operators, corporate flight departments, flight schools, military operations and state/local law enforcement operations. These firms, in turn, provide employment and income to individuals who pay taxes to state and local governments. Exhibit 1 shows how air traffic activity at these airports generates impacts throughout the local, state and national economy. As this exhibit indicates, the impact of an airport on a local, state or national economy cannot be reduced to a single number, but instead, airport activity creates several impacts. These are the *revenue impact*, *employment impact*, *personal income impact*, and *tax impact*. These impacts are not additive. For example, the income impact is a part of the revenue impact, and adding these impacts together would result in double counting.

1.1 Revenue Impact

At the outset, activity at the airport generates *business revenue* for firms which provide air passenger service, freight service and ground support services for general and corporate aviation activity. This business revenue impact is dispersed throughout the economy in several ways. It is used to hire people to provide the services, to purchase goods and services, to pay for the use of airports and to make federal, state and local tax payments. The remainder is used to pay stockholders, retire debt, make investments, or is held as retained earnings. It is to be emphasized that the only portions of the revenue impact that can be definitely identified as remaining in the state are those portions paid out in salaries to direct employees, in state and local taxes, in local purchases, and in payments to the airport itself. Fuel flowage fees and terminal rents paid by tenants provide for some of the costs of operation of the airport and capital costs of new construction.

Exhibit I
Flow of Economic Impacts Generated by Airport Activity



1.2 Employment Impact

The *employment impact* of aviation activity consists of three levels of job impacts.

- :: Direct employment impact - jobs directly generated by airport activity, which would vanish if activity at the airports were to cease.
- :: Induced employment impact - jobs created throughout the regional economy because *individuals* directly employed due to airport activity spend their wages locally on goods and services such as food and housing.
- :: Indirect employment impact - jobs generated due to the purchase of goods and services by firms dependent upon airport activity.

1.3 Income Impact

The *income impact* is the measure of personal wages and salaries received by individuals directly employed due to airport activity. This direct personal income is re-spent throughout the region by those that are directly employed. This re-spending effect in turn generates additional jobs – the induced employment impact. This re-spending throughout the region is estimated using a regional personal income multiplier, which reflects the percentage of purchases that are made within a region. The re-spending effect varies by region: a larger re-spending effect occurs in regions that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with areas that import a relatively large share of consumer goods and services (since personal income “leaks out” of the region for these purchases).

1.4 Tax Impact

State and local *tax impacts* are tax payments to the state and local governments by both firms and individuals involved in providing services in support of airport activity. State and local tax impacts include tax revenue from all types of state and local taxes.

The four types of impacts outlined above are estimated for FY2006 activity at BWI and the 34 general aviation and commuter airports in the State of Maryland.

2. METHODOLOGY

As described in the previous section, economic impacts presented in this report are quantified in terms of jobs, personal income, business revenue and state and local taxes. Furthermore, direct, induced and indirect impacts are estimated. The following describes the methodology used to estimate these impacts for FY2006 activity at Maryland’s 34 public use GA airports.

2.1 DIRECT IMPACTS

Direct impacts are those impacts that would cease to exist if activity at the airport ceased.

The direct impacts to be estimated include:

- :: Job impacts;
- :: Personal income impacts;
- :: Revenue impacts; and
- :: State and local tax impacts.

2.1.1 Direct Employment Impacts

The direct job impacts by each employer (FBO, corporate flight, airport service category, passenger ground transportation category, etc.) are estimated. These job impacts are estimated based on a direct count of the airport category employees obtained from the interview results of 354 companies.

2.1.2 Direct Income Impacts

The direct income impacts are estimated by multiplying the average annual salaries (adjusted for typical overtime hours and salaries where applicable) for each of the direct number of jobs. The direct income by category is obtained directly from the interviews.

A re-spending effect is then estimated using an income multiplier for the Baltimore/Washington Metropolitan Area, estimated by the Bureau of Economic Analysis. Based on data provided by the Bureau of Economic Analysis, for every one dollar earned by individuals in the Baltimore area, another \$1.37 is spent in the region. Hence, the personal income multiplier for the Baltimore regional economy is 2.37.

2.1.3 Direct Revenue Impact

The revenue impact by economic impact sector is estimated directly from the interviews with airport operators/managers and airport service providers.

2.2 Induced Impacts

Much of the personal income that is directly generated by activity at the airports and received by individuals employed due to airport activity is spent and re-spent throughout the local, regional and national economies. As a result of the purchases of goods and services with this personal income, additional jobs in the local, regional, state and national economies will be generated. That fraction of the income impact used to purchase goods and services produced in Maryland is isolated and the resulting induced employment generated for residents.

To estimate this induced employment impact, the following steps were undertaken:

- :: The percentage of income spent by Baltimore/Washington (Maryland) area residents on various expenditure categories of the economy (i.e., manufacturing, housing, services, food, etc.) are estimated from the Consumer Expenditure Survey;
- :: The ratio of employment to sales in each of the expenditure categories for both wholesale and retail purchases are calculated for the Baltimore-Washington Metropolitan Statistical Area, from data published by the U.S. Census Bureau;
- :: The airport-induced consumption impacts are allocated to the various expenditure categories based on the Bureau of Labor Statistics breakdown for a typical consumer in the Baltimore/Washington (Maryland) Metropolitan Area; and
- :: The personal consumption impact allocated to each expenditure category is then multiplied by the ratio of employment to sales in that category to estimate the number of induced jobs for regional residents.

It should be emphasized that an input/output model is not used to estimate induced jobs.

Instead of using a regionalized input/output model, re-spending categories based on area specific data, and data specific to the region in which employees dependent upon each of the airports reside are developed.

2.3 Indirect Impacts

Indirect impacts are generated by the local purchases of the firms directly dependent upon airport activity. These impacts are estimated based on local purchase patterns, as developed during the interview process. The local and in-state purchases by the firms providing direct services to the airport facilities are then combined with jobs-to-sales coefficients and income and output vectors derived from the Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II), which was prepared for the State of Maryland.

2.4 Tax Impacts

Per employee tax burdens as well as data from the Tax Foundation (which allows the development of taxes as a percent of per capita income) are used to estimate the tax impacts resulting from activity at the GA airports. These state and local tax burdens include tax revenues from all sources. The tax impacts are estimated for direct, induced and indirect impacts.

3. DATA COLLECTION

Impacts were estimated on the basis of interviews with firms in the five economic impact categories described above. A total of 354 firms were contacted, representing a nearly 100% coverage of tenants and firms providing services at the 34 general aviation and commuter airports.

In addition to the 354 surveys, operational and financial data was requested and obtained from the airport operators/managers and was used in this analysis. This data includes:

- :: Number of employees (full time and part time) and average salary (or total payroll less benefits);
- :: Number of aircraft operations;
- :: Detailed list of airport revenues (e.g. landing fees, rent, user fees, concessions) and expenditures (e.g. office supplies, M/R, fuel, communications, insurance, contracted services); and
- :: List of capital expenditures for FY2006.

4. SUMMARY OF FINDINGS

Table 1 presents a summary of the regional economic impacts attributable to the 34 general aviation and commuter airports in the Maryland Aviation System in FY2006.

In FY2006, the 34 general aviation and commuter airports in the Maryland General Aviation System created the economic impacts summarized in Table 1.

As shown in the table, the 34 general aviation and commuter airports in the State of Maryland created the following impacts:

- :: 6,797 total jobs, of which:
 - > 3,555 were directly created by airport activity at these airports;
 - > 1,810 jobs were supported in local economic sectors due to the purchases for goods and services by those 3,555 directly employed workers; and
 - > 1,432 indirect jobs in the local economy were supported by \$136 million of local purchases by the airport tenants.

- :: \$396.2 million dollars of personal wage and salary income was created in the State of Maryland by the activity at these 34 airports. This income consists of:
 - > \$142.1 of direct wages and salaries earned by the 3,555 direct job holders;
 - > \$191.2 induced income and local consumption expenditures; and
 - > \$62.8 million of indirect income which was earned by the 1,432 indirect job holders.
- :: \$501.4 million of business revenue created from landing fees and servicing of the general aviation and commuter aircraft.
- :: \$40.8 million of state and local taxes and \$1.0 million of Federal aviation taxes.

**Table 1
Economic Impacts of General Aviation and Commuter Activity In the State of Maryland**

	General Aviation/ Commuter Airports
JOBS	
Direct Jobs	3,555
Induced Jobs	1,810
Indirect Jobs	<u>1,432</u>
Total Jobs	6,797
Personal Income (000)	
Direct	\$142,103
Induced	\$191,235
Indirect	<u>\$62,813</u>
Total Personal Income	\$396,151
Business Revenue (000)	\$501,417
Local Purchases (000)	\$135,972
State and Local Taxes (000)	\$40,802
Federal Aviation Taxes (000)	\$1,002

Totals may not equate due to rounding

Table 2 summarizes the impacts by airport.

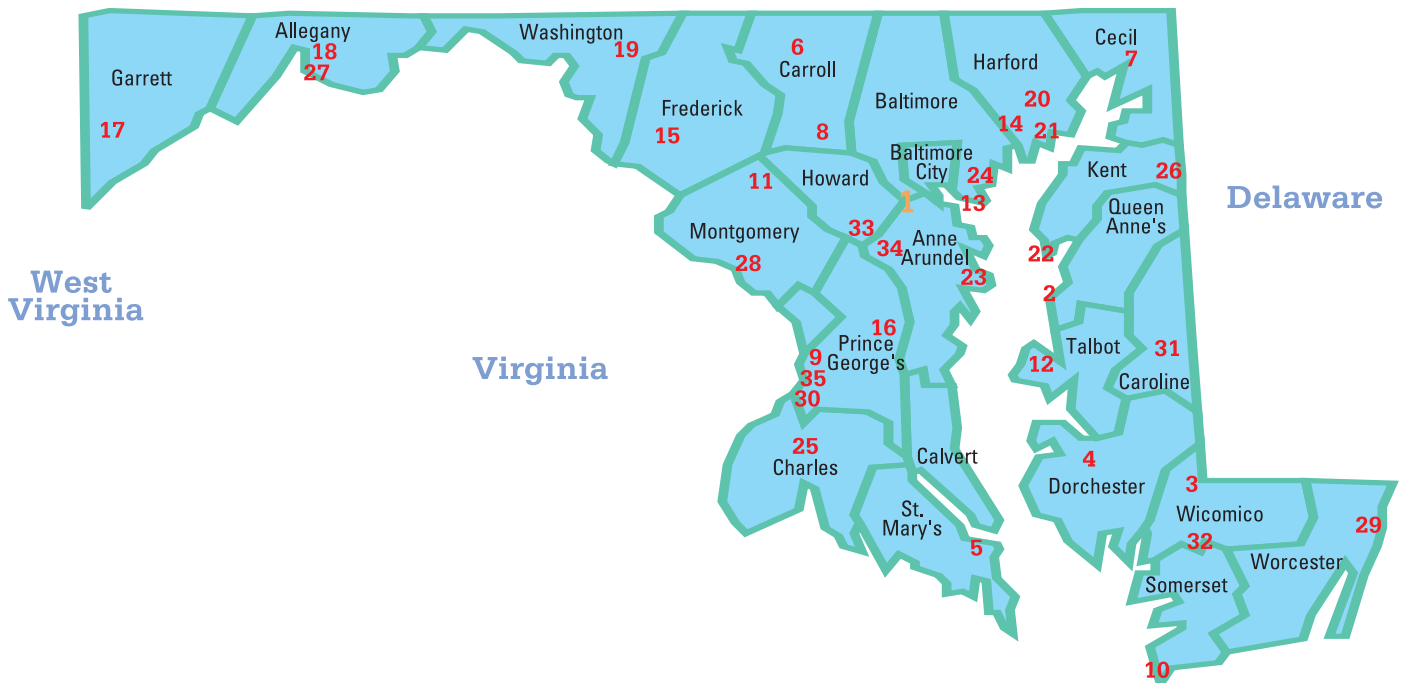
Table 2
Summary of Impacts Generated by Maryland's General Aviation and Commuter Airports

	Jobs				Personal Income (000)				Revenue (000)	Taxes (000)	Purchases (000)
	Direct	Induced	Indirect	Total	Direct	Induced	Indirect	Total			
Bay Bridge Airport	20	8	9	37	\$575	\$788	\$439	\$1,802	\$1,430	\$186	\$774
Bennett Airport	9	4	2	15	\$258	\$354	\$85	\$697	\$453	\$72	\$159
Cambridge/Dorchester	21	10	20	51	\$758	\$1,038	\$878	\$2,674	\$1,932	\$275	\$1,506
Capt. Walter Francis Duke	45	24	36	105	\$1,847	\$2,531	\$1,627	\$6,005	\$5,666	\$618	\$3,363
Carroll County	75	42	28	145	\$3,326	\$4,557	\$1,427	\$9,310	\$4,962	\$959	\$2,712
Cecil County Airport	18	8	8	34	\$618	\$846	\$335	\$1,799	\$874	\$185	\$565
Clearview Airport	3	1	1	5	\$88	\$120	\$47	\$255	\$200	\$26	\$168
College Park Airport	30	13	10	53	\$924	\$1,266	\$478	\$2,668	\$409	\$275	\$952
Crisfield-Somerset Airport	2	1	1	4	\$53	\$72	\$60	\$185	\$132	\$19	\$150
Davis Airport	2	1		3	\$70	\$96		\$166	\$265	\$17	
Easton Airport	183	91	88	362	\$6,948	\$9,518	\$4,116	\$20,582	\$21,767	\$2,120	\$7,716
Essex Skypark	6	4	3	13	\$359	\$492	\$118	\$969	\$298	\$100	\$225
Fallston Airport	3	1	0	5	\$120	\$164	\$6	\$290	\$60	\$30	\$15
Frederick Municipal Airport	477	292	477	1,246	\$23,841	\$32,663	\$20,695	\$77,199	\$108,679	\$7,951	\$52,761
Freeway Airport	29	9	5	43	\$525	\$719	\$274	\$1,518	\$1,400	\$156	\$476
Garrett County Airport	4	2	2	8	\$140	\$192	\$95	\$427	\$200	\$44	\$180
Greater Cumberland on Site	28	14	7	49	\$1,062	\$1,454	\$258	\$2,774	\$1,051	\$285	\$1,096
Hagerstown Regional on Site	580	323	94	997	\$25,670	\$35,169	\$4,429	\$65,268	\$68,107	\$6,723	\$8,988
Hagerstown Regional Visitor	24	5	10	39	\$392	\$290	\$282	\$964	\$1,599	\$99	\$534
Hagerstown Regional Total	604	328	104	1,036	\$26,062	\$35,459	\$4,711	\$66,232	\$69,706	\$6,822	\$9,522
Harford County Airport	10	4	11	25	\$276	\$379	\$507	\$1,162	\$752	\$120	\$1,044
Havre de Grace Seaplane Base	1	0	0	1	\$18	\$24	\$1	\$43	\$66	\$4	\$1
Kentmorr Airpark	1	0	0	1	\$18	\$24	\$3	\$45	\$66	\$5	\$5
Lee Airport	8	3	0	11	\$234	\$321	\$14	\$569	\$1,063	\$59	\$28
Martin Airport	959	541	261	1,761	\$43,179	\$59,154	\$12,247	\$114,580	\$205,994	\$11,802	\$23,573
Maryland Airport	18	10	14	42	\$805	\$1,103	\$715	\$2,623	\$2,623	\$270	\$1,354
Mexico Farms Airport	4	2	0	6	\$123	\$168	\$3	\$294	\$463	\$30	\$7
Montgomery County Airpark	34	18	30	82	\$1,383	\$1,895	\$1,360	\$4,638	\$6,528	\$478	\$2,348
Ocean City Municipal Airport	42	16	17	75	\$1,121	\$1,535	\$819	\$3,475	\$5,080	\$358	\$1,619
Potomac Airfield	19	10	6	35	\$821	\$1,124	\$302	\$2,247	\$1,666	\$231	\$563
Ridgely Airpark	5	2	2	9	\$113	\$154	\$90	\$357	\$422	\$37	\$191
Salisbury-Ocean City on Site	517	253	122	892	\$19,231	\$26,347	\$5,396	\$50,974	\$26,701	\$5,250	\$12,333
Salisbury-Ocean City Visitor	313	68	123	504	\$5,072	\$3,753	\$3,644	\$12,469	\$20,692	\$1,284	\$6,911
Salisbury-Ocean City Total	830	321	245	1,396	\$24,303	\$30,100	\$9,040	\$63,443	\$47,393	\$6,534	\$19,244
Suburban Airpark	2	1	1	4	\$60	\$82	\$31	\$173	\$265	\$18	\$57
Tipton Airport	50	23	34	107	\$1,754	\$2,403	\$1,623	\$5,780	\$8,224	\$595	\$2,740
Washington Executive/Hyde Field	13	5	9	27	\$321	\$440	\$410	\$1,171	\$1,328	\$121	\$858
TOTALS	3,555	1,810	1,432	6,797	\$142,103	\$191,235	\$62,813	\$396,151	\$501,417	\$40,802	\$135,972

Exhibit 2 shows the location of each of the airports within the State of Maryland.

Exhibit 2

Location of each of the General Aviation and Commuter Airports within the State of Maryland



1 Baltimore Washington International Thurgood Marshall Airport	18 Greater Cumberland Regional Airport
2 Bay Bridge Airport	19 Hagerstown Regional Airport
3 Bennett Airport	20 Harford County Airport
4 Cambridge/Dorchester County Airport	21 Havre de Grace Seaplane Base
5 Capt. Walter Francis Duke Regional Airport @ St. Mary's	22 Kentmorr Airpark
6 Carroll County Regional Airport	23 Lee Airport
7 Cecil County Airport	24 Martin State Airport
8 Clearview Airport	25 Maryland Airport
9 College Park Airport	26 Massey Aerodrome
10 Crisfield-Somerset County Airport	27 Mexico Farms Airport
11 Davis Airport	28 Montgomery County Airpark, Potomac Airfield
12 Easton Airport	29 Ocean City Municipal Airport
13 Essex Skypark	30 Potomac Field
14 Fallston Airport	31 Ridgely Airpark
15 Frederick Municipal Airport	32 Salisbury-Ocean City: Wicomico Regional
16 Freeway Airport	33 Suburban Airpark
17 Garrett County Airport	34 Tipton Airport
	35 Washington Executive Airport/Hyde Field

The economic impacts of each of the 34 airports follows.

Bay Bridge Airport (W29)

The Bay Bridge Airport is a public-use general aviation airport owned by Queen Anne’s County. The airport is located on Kent Island approximately one mile west of Stevensville. The airport has one asphalt runway available for use (2,910 x 60 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental; and
- ⌘ T-hangars and paved tiedowns.

Aviation activity at the Bay Bridge Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	59	Local GA	36%
Multi-engine	10	Transient GA	64%
Totals	69	Total Operations	38,100

In addition to the airport manager, seven tenants of the Bay Bridge Airport were interviewed, including Capitol Air, Lynn Aviation, Helicopter Academy, and Safe Flight, to assess the economic impacts that are generated by the airport on the local economy. Bay Bridge Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	37
⌘ Personal Income (Direct, Induced, and Indirect)	\$1,802,000
⌘ Revenue	\$1,430,000
⌘ Taxes	\$186,000
⌘ Local Purchases	\$774,000

Summary of GA Airport Economic Impacts by Airport

Bennett Airport (1N5)

The Bennett Airport is a privately owned general aviation airport located on the Delmarva Peninsula approximately four miles northwest of Salisbury. The airport has two turf runways available for use (2,300 x 95 ft. and 3,150 x 95 ft.) and provides the following services:

- ⌘ Minor power plant service;
- ⌘ Agricultural operations (Aerial spraying);
- ⌘ Skydiving; and
- ⌘ T-hangars and turf tiedowns.

Aviation activity at the Bennett Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	10	Local GA	100%
Multi-engine	0		
Totals	10	Total Operations	1,976

In addition to the airport manager, two tenants of the Bennett Airport were interviewed; Skydive Maryland and Tim’s Aerial Services, to assess the economic impacts that are generated by the airport on the local economy. Bennett Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	15
⌘ Personal Income (Direct, Induced, and Indirect)	\$697,000
⌘ Revenue	\$453,000
⌘ Taxes	\$72,000
⌘ Local Purchases	\$159,000

Cambridge/Dorchester County Airport (CGE)

The Cambridge/Dorchester County Airport is a public-use general aviation airport located on the Delmarva Peninsula approximately three miles southeast of Cambridge. The airport has one asphalt/grooved runway available for use (4,476 x 75 ft.) and provides the following services:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental;
- ⚡ Agricultural operations (Aerial Spraying); and
- ⚡ T-hangars and paved tiedowns.

Aviation activity at the Cambridge/Dorchester County Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	38	Local GA	54%
Multi-engine	4	Transient GA	45%
Helicopter	0	Military	1%
Totals	42	Total Operations	25,698

In addition to the airport manager, six tenants of the Cambridge/Dorchester County Airport were interviewed, including Tudor Aviation, Cambridge Aero, USDA Mosquito Control, and Wittsend Aviation, to assess the economic impacts that are generated by the airport on the local economy. Cambridge/Dorchester County Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	51
⚡ Personal Income (Direct, Induced, and Indirect)	\$2,674,000
⚡ Revenue	\$1,932,000
⚡ Taxes	\$275,000
⚡ Local Purchases	\$1,506,000

Capt. Walter Francis Duke Regional Airport at St. Mary's (2W6)

The Captain Walter Francis Duke Regional Airport is a public-use airport owned by St. Mary's County. The airport is located approximately four miles northeast of Leonardtown and has one asphalt runway (4,150 x 75 ft.). This airport provides the following services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental and sales;
- ⌘ Charter flights;
- ⌘ Air ambulance; and
- ⌘ T-hangars and paved tiedowns.

Aviation activity at the Capt. Walter Francis Duke Regional Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	86	Local GA	77%
Multi-engine	8	Transient GA	19%
Helicopter	3	Air Taxi	5%
Glider	1		
Ultralight	2		
Totals	100	Total Operations	52,618

In addition to the airport manager, four tenants of the Captain Walter Francis Duke Regional Airport were interviewed, including Airtech Inc., Maryland State Police and Piedmont Flight Center, to assess the economic impacts that are generated by the airport on the local economy. Capt. Walter Francis Duke Regional Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	105
⌘ Personal Income (Direct, Induced, and Indirect)	\$6,005,000
⌘ Revenue	\$5,666,000
⌘ Taxes	\$618,000
⌘ Local Purchases	\$3,363,000

Carroll County Regional Airport/Jack B. Poage Field (DMW)

The Carroll County Regional Airport is a public-use airport owned by Carroll County. The airport is located approximately three miles north of Westminster and has one asphalt/grooved runway (5,100 x 100 ft.). The airport provides:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental and sales;
- ⚡ Charter flights; and
- ⚡ T-hangars and paved tiedowns.

Aviation activity at the Carroll County Regional Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	112	Local GA	75%
Multi-engine	13	Transient GA	24%
Helicopter	2	Military	.5%
Jet	4	Air Taxi	.5%
Totals	131	Total Operations	153,690

In addition to the airport manager, six tenants of the Carroll County Regional Airport were interviewed, including Westair Aviation, Surdex Corporation, EFB Flight Group, Aeroservices Inc., and Bullock's Airport Inn, to assess the economic impacts that are generated by the airport on the local economy. Carroll County Regional Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	145
⚡ Personal Income (Direct, Induced, and Indirect)	\$9,310,000
⚡ Revenue	\$4,962,000
⚡ Taxes	\$959,000
⚡ Local Purchases	\$2,712,000

Cecil County Airport (58M)

The Cecil County Airport is a privately owned general aviation airport located approximately three miles southwest of Elkton. The airport has one asphalt runway (3,000 x 60 ft.) and provides the following services:

- ⚡ Fuel Sales (100LL and MOGAS);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction; and
- ⚡ T-hangars and turf tiedowns.

Aviation activity at the Cecil County Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	41	Local GA	83%
Multi-engine	3	Transient GA	17%
Glider	0		
Ultralight	3		
Totals	47	Total Operations	13,662

In addition to the airport manager, three tenants of the Cecil County Airport were interviewed, including Raintree Corporation, and Cecil County Flight School, to assess the economic impacts that are generated by the airport on the local economy. Cecil County Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	34
⚡ Personal Income (Direct, Induced, and Indirect)	\$1,799,000
⚡ Revenue	\$874,000
⚡ Taxes	\$185,000
⚡ Local Purchases	\$565,000

Clearview Airport (1W2)

The Clearview Airport is a privately owned general aviation airport located in Carroll County approximately seven miles south of Westminster. The airport has one asphalt runway (1,840 x 30 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL);
- ⌘ Major airframe service;
- ⌘ Major power plant service; and
- ⌘ T-hangars and tiedowns.

Aviation activity at the Clearview Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	32	Local GA	10%
		Transient GA	90%
Totals	32	Total Operations	15,300

The manager of the Clearview Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Clearview Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	5
⌘ Personal Income (Direct, Induced, and Indirect)	\$255,000
⌘ Revenue	\$200,000
⌘ Taxes	\$26,000
⌘ Local Purchases	\$168,000

College Park Airport (CGS)

The College Park Airport is a public-use airport owned by the Maryland National Capital Park and Planning Commission. The airport is located approximately one mile east of College Park and the University of Maryland College Park campus. This facility has one asphalt runway (2,610 x 60 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Restaurant; and
- ⌘ Paved and turf tiedowns.

Aviation activity at the College Park Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	44	Local GA	96%
Multi-engine	2	Military	4%
Totals	46	Total Operations	2,775

In addition to the airport manager, three tenants of the College Park Airport were interviewed, including the Prince George's County Police, 94th Aero Squadron Restaurant, and College Park Aviation Museum, to assess the economic impacts that are generated by the airport on the local economy. College Park Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	53
⌘ Personal Income (Direct, Induced, and Indirect)	\$2,668,000
⌘ Revenue	\$409,000
⌘ Taxes	\$275,000
⌘ Local Purchases	\$952,000

Crisfield-Somerset County Airport (W41)

The Crisfield-Somerset County Airport is a publicly-owned general aviation airport located on the Delmarva Peninsula approximately three miles northeast of Crisfield. The airport has one asphalt runway (2,490 x 75 ft.) and one turf runway (3,280 x 165 ft.), and offers the following services:

- ⚡ Fuel Sales (100LL);
- ⚡ Major airframe service;
- ⚡ Major power plant service; and
- ⚡ Paved and turf tiedowns.

Aviation activity at the Crisfield-Somerset County Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	3	Local GA	13%
Ultralight	3	Transient GA	79%
		Military	5%
		Air Taxi	3%
Totals	6	Total Operations	3,040

The manager of the Crisfield-Somerset County Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Crisfield-Somerset County Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	4
⚡ Personal Income (Direct, Induced, and Indirect)	\$185,000
⚡ Revenue	\$132,000
⚡ Taxes	\$19,000
⚡ Local Purchases	\$150,000

Davis Airport (1W2)

The Davis Airport is a privately owned general aviation airport located in central Maryland approximately three miles north of Laytonsville. The airport has one turf/asphalt runway (2,005 x 110 ft.) and provides the following services:

- ⌘ Minor airframe service;
- ⌘ Minor power plant service; and
- ⌘ Paved and turf tiedowns.

Aviation activity at the Davis Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	33	Local GA	98%
		Transient GA	2%
Totals	33	Total Operations	5,096

The manager of the Davis Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Davis Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	3
⌘ Personal Income (Direct, Induced, and Indirect)	\$166,000
⌘ Revenue	\$265,000
⌘ Taxes	\$17,000
⌘ Local Purchases	N/A

Easton Airport/Newnam Field (ESN)

The Easton Airport is a publicly-owned general aviation airport located on the Delmarva Peninsula approximately two miles north of Easton. The airport has two asphalt runways (4,003 x 100 ft. and 5,500 x 100 ft.) and provides the following services:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental and sales;
- ⚡ Aerial photography;
- ⚡ Avionics service;
- ⚡ Charter flights;
- ⚡ Corporate flight departments;
- ⚡ Automobile rentals;
- ⚡ Airport restaurant; and
- ⚡ T-hangars and paved tiedowns.

Aviation activity at the Easton Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	118	Local GA	20%
Multi-engine	23	Transient GA	64%
Jet	12	Military	4%
Helicopter	7	Air Taxi	11%
Totals	160	Total Operations	160,000

In addition to the airport manager, 22 tenants of the Easton Airport were interviewed, including Air Repair, East Coast Flight Service, Easton Aviation, Easton Jet Service, Maryland Air, Omni Jet Trading, Hangar Café, S&S Aviation, Mallard Haven LLC and Talbot EMS, to assess the economic impacts that are generated by the airport on the local economy. Easton Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	362
⚡ Personal Income (Direct, Induced, and Indirect)	\$20,582,000
⚡ Revenue	\$21,767,000
⚡ Taxes	\$2,120,000
⚡ Local Purchases	\$7,716,000

Essex Skypark (W48)

The Essex Skypark is a publicly-owned general aviation airport located approximately three miles southeast of Baltimore. The airport has one asphalt runway (2,084 x 28 ft.) and one water runway (3,000 x 300 ft.), which is primarily used by ultralight seaplanes. The following services are available at this airport:

- ⌘ Minor power plant service;
- ⌘ Aircraft rental;
- ⌘ Aerial surveying; and
- ⌘ T-hangars and turf tiedowns.

Aviation activity at the Essex Skypark represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	34	Local GA	93%
Ultralight	2	Transient GA	7%
Totals	36	Total Operations	8,584

In addition to the airport manager, four tenants of the Essex Skypark were interviewed, including Jordan Aero Services and Phoenix Air Ads, to assess the economic impacts that are generated by the airport on the local economy. Essex Skypark generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	13
⌘ Personal Income (Direct, Induced, and Indirect)	\$969,000
⌘ Revenue	\$298,000
⌘ Taxes	\$100,000
⌘ Local Purchases	\$225,000

Fallston Airport (W42)

The Fallston Airport is a privately-owned general aviation airport located approximately one mile south of Fallston. The airport has one asphalt runway (2,200 x 50 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL);
- ⌘ Minor airframe service;
- ⌘ Minor power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental; and
- ⌘ Hangars and turf tiedowns.

Aviation activity at the Fallston Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	31	Local GA	73%
		Transient GA	26%
		Military	1%
Totals	31	Total Operations	8,189

The airport manager of the Fallston Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Fallston Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	5
⌘ Personal Income (Direct, Induced, and Indirect)	\$290,000
⌘ Revenue	\$60,000
⌘ Taxes	\$30,000
⌘ Local Purchases	\$15,000

Frederick Municipal Airport (FDK)

The Frederick Municipal Airport is a publicly-owned general aviation airport located in Frederick County at the junction of I-70 and I-270. The airport has two asphalt runways (5,220 x 100 ft. and 3,600 x 75 ft.) and provides the following services:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental and sales;
- ⚡ Avionics service;
- ⚡ Charter flights;
- ⚡ Glider operations; and
- ⚡ Hangars and paved tie-downs.

Aviation activity at the Frederick Municipal Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	198	Local GA	86%
Multi-engine	27	Transient GA	11%
Jet	16	Air Taxi	2%
Helicopters	10	Military	1%
Gliders	42		
Ultralights	6		
Totals	299	Total Operations	156,000

In addition to the airport manager, 25 tenants of the Frederick Municipal Airport were interviewed, including Frederick Aviation, Frederick Flight Center, Richard Crouse Associates, Liberty Air, Maryland State Police, Southern Research Institute, AOPA, and Avemco, to assess the economic impacts that are generated by the airport on the local economy. Frederick Municipal Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	1,246
⚡ Personal Income (Direct, Induced, and Indirect)	\$77,199,000
⚡ Revenue	\$108,679,000
⚡ Taxes	\$7,951,000
⚡ Local Purchases	\$52,761,000

Freeway Airport (W00)

The Freeway Airport is a privately-owned general aviation airport located two miles northwest of Mitchellville and approximately 15 miles east of downtown Washington, DC. The airport has one asphalt runway (2,425 x 30 ft.) and provides the following services:

- ⚡ Fuel Sales (100LL);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental; and
- ⚡ Paved and turf tiedowns.

Aviation activity at the Freeway Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	52	Local GA	90%
Multi-engine	3	Transient GA	6%
Ultralight	1	Military	3%
		Air Taxi	1%
Totals	56	Total Operations	49,165

In addition to the airport manager, one tenant of the Freeway Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Freeway Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	43
⚡ Personal Income (Direct, Induced, and Indirect)	\$1,518,000
⚡ Revenue	\$1,400,000
⚡ Taxes	\$156,000
⚡ Local Purchases	\$476,000

Garrett County Airport (2G4)

The Garrett County Airport is a public-use airport owned by Garrett County and is located approximately 13 miles northeast of Oakland. The airport has one asphalt runway available for use (3,000 x 75 ft.) and provides the following services:

- ⚡ Fuel Sales (Jet A, 100LL and 80oct);
- ⚡ Flight instruction;
- ⚡ Aircraft rental;
- ⚡ Charter flights; and
- ⚡ Thangars and paved tiedowns.

Aviation activity at the Garrett County Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	8	Local GA	53%
Multi-engine	2	Transient GA	42%
Helicopter	1	Military	3%
		Air Taxi	2%
Totals	11	Total Operations	17,800

In addition to the airport manager, one tenant of the Garrett County Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Garrett County Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	8
⚡ Personal Income (Direct, Induced, and Indirect)	\$427,000
⚡ Revenue	\$200,000
⚡ Taxes	\$44,000
⚡ Local Purchases	\$180,000

Greater Cumberland Regional Airport (CBE)

Although the Greater Cumberland Regional Airport is located three miles south of Cumberland, MD in the State of West Virginia, the airport is part of the Maryland aviation system and is owned by the Potomac Highlands Airport Authority. The Greater Cumberland Regional Airport has two asphalt runways (5,048 x 150 ft. and 2,442 x 150 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Glider operations; and
- ⌘ T-hangars and paved tiedowns.

Aviation activity at the Greater Cumberland Regional Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	56	Local GA	80%
Multi-engine	4	Transient GA	17%
Jet	2	Military	2%
Helicopters	2		
Gliders	5		
Totals	69	Total Operations	14,235

In addition to the airport manager, 10 tenants of the Greater Cumberland Regional Airport were interviewed, including Maryland State Police, Summerfield Aviation, and CSS Enterprises, to assess the economic impacts that are generated by the airport on the local economy. Greater Cumberland Regional Airport generated the following impacts (on-site and visitor):

⌘ Jobs (Direct, Induced, and Indirect)	49
⌘ Personal Income (Direct, Induced, and Indirect)	\$2,774,000
⌘ Revenue	\$1,051,000
⌘ Taxes	\$285,000
⌘ Local Purchases	\$1,096,000

Hagerstown Regional Airport – Richard A. Henson Field (HGR)

The Hagerstown Regional Airport, located four miles North of Hagerstown, offers commuter passenger service to Pittsburgh with two daily flights. Passenger activity represents approximately 425 enplaning passengers per month. The Hagerstown Regional Airport has two asphalt runways (5,461 x 150 ft. and 3,160 x 100 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental and sales;
- ⌘ Commuter air passenger service/Charter flights;
- ⌘ Avionics service;
- ⌘ Air cargo;
- ⌘ Automobile rentals;
- ⌘ Corporate flight departments;
- ⌘ Air Traffic Control Tower; and
- ⌘ Thangars and paved tiedowns.

Aviation activity at the Hagerstown Regional Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	136	Local GA	29%
Multi-engine	53	Transient GA	59%
Jets	3	Military	6%
Ultralights	3	Air Taxi	3%
Helicopters	2	Commercial	4%
Totals	197	Total Operations	52,766

In addition to the airport manager, 41 tenants of the Hagerstown Regional Airport were interviewed, including US Airways Express, TSA, Northrop Grumman, JRA Executive Air, Hagerstown Aircraft Services, ARDI, and Rider Jet Center, to assess the economic impacts that are generated by the airport on the local economy. Hagerstown Regional Airport generated the following impacts (on-site and visitor):

⌘ Jobs (Direct, Induced, and Indirect)	1,036
⌘ Personal Income (Direct, Induced, and Indirect)	\$66,232,000
⌘ Revenue	\$69,706,000
⌘ Taxes	\$6,822,000
⌘ Local Purchases	\$9,522,000

Harford County Airport (0W3)

The Harford County Airport is a privately-owned general aviation airport located approximately three miles east of Churchville in Harford County. The airport has one asphalt runway (2,140 x 40 ft.) and one turf runway (2,000 x 85 ft.). The following services are provided at this airport:

- ⌘ Fuel Sales (100LL);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction; and
- ⌘ T-hangars and paved tiedowns.

Aviation activity at the Harford County Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	53	Local GA	80%
Gliders	6	Transient GA	20%
Ultralights	2	Military	.5%
Totals	61	Total Operations	35,529

In addition to the airport manager, three tenants of the Harford County Airport, including Harford Air, Gorge Air Service, and North Community Aircraft, to assess the economic impacts that are generated by the airport on the local economy. Harford County Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	25
⌘ Personal Income (Direct, Induced, and Indirect)	\$1,162,000
⌘ Revenue	\$752,000
⌘ Taxes	\$120,000
⌘ Local Purchases	\$1,044,000

Havre de Grace Seaplane Base (M06)

The Havre de Grace Seaplane Base is a privately-owned general aviation airport located approximately one mile east of Havre de Grace and is equipped with two water runways (8,000 x 200 ft.).

Aviation activity at the Havre de Grace Seaplane Base represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	1	Local GA	67%
Ultralights	2	Transient GA	33%
Totals	3	Total Operations	240

The manager of the Havre de Grace Seaplane Base was interviewed to assess the economic impacts that are generated by the airport on the local economy. Havre de Grace Seaplane Base generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	1
⚡ Personal (Direct, Induced, and Indirect)	\$43,000
⚡ Revenue	\$66,000
⚡ Taxes	\$4,000
⚡ Local Purchases	\$1,000

Kentmorr Airpark (3W3)

The Kentmorr Airpark is a privately-owned general aviation airport that was established as a residential airpark, owned and operated by the local homeowners association. The airpark is located on Kent Island, approximately five miles southwest of Stevensville and provides convenient access to a marina, restaurant, and golf course. The airpark has one turf runway (2,400 x 75 ft.) and provides turf aircraft parking.

Aviation activity at the Kentmorr Airpark represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	15	Local GA	50%
		Transient GA	50%
Totals	15	Total Operations	500

The manager of the Kentmorr Airpark was interviewed to assess the economic impacts that are generated by the airpark on the local economy. Kentmorr Airpark generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	1
⌘ Personal Income (Direct, Induced, and Indirect)	\$45,000
⌘ Revenue	\$66,000
⌘ Taxes	\$5,000
⌘ Local Purchases	\$5,000

Lee Airport (ANP)

The Lee Airport is a privately-owned general aviation airport located approximately five miles southwest of Annapolis. The airport has one asphalt runway (2,505 x 48 ft.) and provides the following aviation related services:

- ⌘ Fuel Sales (100LL);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental; and
- ⌘ T-hangars and turf tiedowns.

Aviation activity at the Lee Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	89	Local GA	67%
Multi-engine	10	Transient GA	29%
Helicopters	3	Military	5%
Totals	102	Total Operations	31,638

In addition to the airport manager, five tenants of the Lee Airport were interviewed, including Dent Aviation, Civil Air Patrol, and Chesapeake Aviation, to assess the economic impacts that are generated by the airport on the local economy. Lee Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	11
⌘ Personal Income (Direct, Induced, and Indirect)	\$569,000
⌘ Revenue	\$1,063,000
⌘ Taxes	\$59,000
⌘ Local Purchases	\$28,000

Martin State Airport (MTN)

The Martin State Airport is a public-use general aviation airport owned and operated by the Maryland Aviation Administration. The airport is located approximately nine miles east of Baltimore and has one concrete runway (6,996 x 180 ft.) and one helipad (65 x 65 ft.). The following aviation-related services are provided at Martin State Airport:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental and sales;
- ⌘ Air ambulance;
- ⌘ Avionics service;
- ⌘ Aviation museum;
- ⌘ Air Traffic Control Tower;
- ⌘ Corporate flight departments;
- ⌘ Community and T-hangars; and
- ⌘ Paved and turf tiedowns.

Aviation activity at the Martin State Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	192	Local GA	34%
Multi-engine	23	Transient GA	56%
Jet	21	Military	8%
Helicopters	21	Air Taxi	2%
Military	38		
Totals	295	Total Operations	104,390

38 tenants of the Martin State Airport were interviewed, including the Maryland Air National Guard, Brett Aviation, Northrup Grumman, Skytech, Lockheed Martin, Maryland State Police, State Medivac, and the Baltimore City and Baltimore County Police Departments, to assess the economic impacts that are generated by the airport on the local economy. Martin State Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	1,761
⌘ Personal Income (Direct, Induced, and Indirect)	\$114,580,000
⌘ Revenue	\$205,994,000
⌘ Taxes	\$11,802,000
⌘ Local Purchases	\$23,573,000

Maryland Airport (2W5)

The Maryland Airport is a privately-owned general aviation airport located approximately four miles east of Indian Head. The airport has one asphalt runway (3,000 x 50 ft.) and one turf runway (1,860 x 100 ft.) and provides the following aviation related services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft sales;
- ⌘ Avionics services;
- ⌘ Charter flights;
- ⌘ Corporate flight departments; and
- ⌘ Hangars and paved tiedowns.

Aviation activity at the Maryland Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	64	Local GA	54%
Multi-engine	4	Transient GA	36%
Jet	1	Military	10%
Helicopter	1		
Totals	70	Total Operations	17,000

In addition to the airport manager, six tenants of the Maryland Airport were interviewed, including Bauserman Services, Gustave Inc., Professional Flight Services, and Medstar, to assess the economic impacts that are generated by the airport on the local economy. Maryland Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	42
⌘ Personal Income (Direct, Induced, and Indirect)	\$2,623,000
⌘ Revenue	\$2,623,000
⌘ Taxes	\$270,000
⌘ Local Purchases	\$1,354,000

Massey Aerodrome (MD1)

The Massey Aerodrome is a privately-owned general aviation airport/restoration museum located in western Maryland approximately two miles east of Massey. The airport has one turf runway (3,000 x 100 ft.). The airport is operated by volunteers, and hence does not have a quantifiable economic impact.

Aviation activity at the Massey Aerodrome represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	13		
Multi-engine	2		
Totals	15	Total Operations	3,588

Mexico Farms Airport (1W3)

The Mexico Farms Airport is a privately-owned general aviation airport located in western Maryland approximately three miles south of Cumberland. The airport has two turf runways (2,120 x 190 ft. and 2,100 x 195 ft.).

Aviation activity at the Mexico Farms Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	9	Local GA	65%
Multi-engine	3	Transient GA	35%
Totals	12	Total Operations	1,261

The manager of the Mexico Farms Airport was interviewed to assess the economic impacts that are generated by the airport on the local economy. Mexico Farms Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	6
⚡ Personal Income (Direct, Induced, and Indirect)	\$294,000
⚡ Revenue	\$463,000
⚡ Taxes	\$30,000
⚡ Local Purchases	\$7,000

Montgomery County Airpark (GAI)

The Montgomery County Airpark is a publicly-owned general aviation airport located three miles northeast of Gaithersburg. The airport has one asphalt runway (4,200 x 75 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental and sales;
- ⌘ Charter flights;
- ⌘ Corporate flight departments;
- ⌘ Airport restaurant; and
- ⌘ T-hangars and paved tiedowns.

Aviation activity at the Montgomery County Airpark represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	148	Local GA	57%
Multi-engine	35	Transient GA	35%
Jet	2	Air Taxi	8%
Helicopter	1		
Totals	186	Total Operations	95,000

In addition to the airport manager, 17 tenants of the Montgomery County Airpark were interviewed, including Montgomery Aviation, Congressional Air Charters, Freestate Aviation, and several corporate flight departments, to assess the economic impacts that are generated by the airport on the local economy. Montgomery County Airpark generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	82
⌘ Personal Income (Direct, Induced, and Indirect)	\$4,638,000
⌘ Revenue	\$6,528,000
⌘ Taxes	\$478,000
⌘ Local Purchases	\$2,348,000

Ocean City Municipal Airport (OXB)

The Ocean City Municipal Airport is a public-use general aviation airport owned by the Town of Ocean City. The airport is located approximately two miles southwest of Ocean City. The airport has two asphalt/concrete runways (3,201 x 75 ft. and 4,072 x 75 ft.) and provides the following aviation-related services:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental;
- ⚡ Passenger service;
- ⚡ Skydiving;
- ⚡ Sightseeing Packages; and
- ⚡ T-hangars and paved tiedowns.

Aviation activity at the Ocean City Municipal Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	37	Local GA	20%
Multi-engine	7	Transient GA	78%
Ultralights	1	Military	2%
Helicopter	1		
Totals	46	Total Operations	37,000

In addition to the airport manager, nine tenants of the Ocean City Municipal Airport were interviewed, including Ocean City Aircraft, Simmons Air, Cloud Dancer, Ocean City Skydiving Center, and Skytours, to assess the economic impacts that are generated by the airport on the local economy. Ocean City Municipal Airport generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	75
⚡ Personal Income (Direct, Induced, and Indirect)	\$3,475,000
⚡ Revenue	\$5,080,000
⚡ Taxes	\$358,000
⚡ Local Purchases	\$1,619,000

Potomac Airfield (VKX)

The Potomac Airfield is a publicly-owned general aviation airport located in the vicinity of Washington, DC in Prince George’s County. The airport has one asphalt runway (2,665 x 40 ft.) and provides the following aviation-related services:

- ⌘ Fuel Sales (100LL and 80oct);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental;
- ⌘ Charter flights; and
- ⌘ T-hangars and turf tiedowns.

Aviation activity at the Potomac Airfield represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	88	Local GA	98%
Multi-engine	3	Transient GA	2%
Totals	91	Total Operations	11,750

In addition to the airport manager, five tenants of the Potomac Airfield were interviewed, including Buckley Aviation, flying Lemur, and ATC Flight Training, to assess the economic impacts that are generated by the airport on the local economy. Potomac Airfield generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	35
⌘ Personal Income (Direct, Induced, and Indirect)	\$2,247,000
⌘ Revenue	\$1,666,000
⌘ Taxes	\$231,000
⌘ Local Purchases	\$563,000

Ridgely Airpark (RJD)

Formerly known as Ridgely-Pelican Airport, the Ridgely Airpark is a privately-owned general aviation airport located on the Delmarva Peninsula approximately two miles northeast of Ridgely and 35 miles east of the Bay Bridge. The airport has one asphalt runway (3,200 x 50 ft.) and provides the following aviation-related services:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Glider operations;
- ⚡ Flight instruction;
- ⚡ Aircraft rental;
- ⚡ Banner towing; and
- ⚡ T-hangars and paved tiedowns.

Aviation activity at the Ridgely Airpark represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	15	Local GA	32%
Multi-engine	1	Transient GA	68%
Gliders	9	Military	.5%
Ultralight	9	Air Taxi	.5%
Totals	34	Total Operations	36,870

In addition to the airport manager, the Consultant interviewed two tenants of the Ridgely Airpark, including Highland Soaring and the Delmarva Soaring Association, to assess the economic impacts that are generated by the airport on the local economy. Ridgely Airpark generated the following impacts:

⚡ Jobs (Direct, Induced, and Indirect)	9
⚡ Personal Income (Direct, Induced, and Indirect)	\$357,000
⚡ Revenue	\$422,000
⚡ Taxes	\$37,000
⚡ Local Purchases	\$191,000

Salisbury-Ocean City: Wicomico Regional Airport (SBY)

The Salisbury-Ocean City: Wicomico Regional Airport is located four miles southeast of Salisbury and offers commuter passenger service to Washington National and Philadelphia International Airports with seven daily flights. Passenger activity represents approximately 6,100 enplaning passengers per month. The Salisbury-Ocean City: Wicomico Regional Airport has one asphalt runway (5,000 x 100 ft.) and one asphalt/concrete runway (5,500 x 150 ft.). The airport provides the following aviation-related services:

- ⚡ Fuel Sales (100LL and Jet A);
- ⚡ Major airframe service;
- ⚡ Major power plant service;
- ⚡ Commuter passenger service;
- ⚡ Flight instruction;
- ⚡ Aircraft rental;
- ⚡ Air Traffic Control Tower;
- ⚡ Corporate flight departments;
- ⚡ Air freight operations;
- ⚡ Automobile rentals; and
- ⚡ Hangars and paved tiedowns.

Aviation activity at the Salisbury-Ocean City: Wicomico Regional Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	77	Local GA	33%
Multi-engine	69	Transient GA	41%
Jet	2	Military	13%
Helicopters	1	Commercial	13%
Ultralights	3		
Totals	152	Total Operations	53,380

In addition to the airport manager, 25 tenants of the Salisbury-Ocean City: Wicomico Regional Airport were interviewed, including Piedmont Airlines, TSA, Federal Express, Maryland State Police, Bayland Aviation, and Reed Security, to assess the economic impacts that are generated by the airport on the local economy. Salisbury-Ocean City: Wicomico Regional Airport generated the following impacts (on-site and visitor):

⚡ Jobs (Direct, Induced, and Indirect)	1,396
⚡ Personal Income (Direct, Induced, and Indirect)	\$63,443,000
⚡ Revenue	\$47,393,000
⚡ Taxes	\$6,534,000
⚡ Local Purchases	\$19,244,000

Suburban Airpark (W18)

The Suburban Airpark is a publicly-owned general aviation airport located approximately two miles southeast of Laurel. The airport has one asphalt runway (2,324 x 40 ft.) and provides the following aviation-related services:

- ⌘ Fuel Sales (100LL);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental; and
- ⌘ T-hangars.

Aviation activity at the Suburban Airpark represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	40	Local GA	98%
		Transient GA	2%
Totals	40	Total Operations	1,750

The manager of the Suburban Airpark was interviewed to assess the economic impacts that are generated by the airport on the local economy. Suburban Airpark generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	4
⌘ Personal Income (Direct, Induced, and Indirect)	\$173,000
⌘ Revenue	\$265,000
⌘ Taxes	\$18,000
⌘ Local Purchases	\$57,000

Tipton Airport (FME)

The Tipton Airport is a public-use general aviation airport owned and operated by the Tipton Airport Authority. The airport is located approximately one mile southwest of Fort Meade (Odenton). The airport has one asphalt runway (3,000 x 75 ft.) and provides the following services:

- ⌘ Fuel Sales (100LL);
- ⌘ Minor airframe service; and
- ⌘ Minor power plant service.

Aviation activity at the Tipton Airport represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	100	Local GA	23%
Multi-engine	11	Transient GA	75%
Helicopters	10	Air Taxi	2%
Totals	121	Total Operations	48,000

In addition to the airport manager, the Consultant interviewed nine tenants of the Tipton Airport including Medstar, CJ Aviation, Glenwood Aviation and Capitol Air, to assess the economic impacts that are generated by the airport on the local economy. Tipton Airport generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	107
⌘ Personal Income (Direct, Induced, and Indirect)	\$5,780,000
⌘ Revenue	\$8,224,000
⌘ Taxes	\$595,000
⌘ Local Purchases	\$2,740,000

Washington Executive Airport/Hyde Field (W32)

Washington Executive/Hyde Field is a privately-owned general aviation airport located approximately two miles southwest of Clinton. The airport has one asphalt runway (3,000 x 60 ft.) and provides the following aviation-related services:

- ⌘ Fuel Sales (100LL and Jet A);
- ⌘ Major airframe service;
- ⌘ Major power plant service;
- ⌘ Flight instruction;
- ⌘ Aircraft rental;
- ⌘ Charter flights; and
- ⌘ T-hangars and paved tiedowns.

Aviation activity at the Washington Executive/Hyde Field represents the following operational statistics regarding based aircraft and number of operations:

Based Aircraft		Annual Aircraft Operations	
Single-engine	52	Local GA	100 %
Multi-engine	2		
Totals	54	Total Operations	4,212

In addition to the airport manager, the Consultant interviewed four tenants of the Washington Executive/Hyde Field, including Clinton Aero Maintenance, Fetter Aviation, Cloud Club and Gilley Aviation, to assess the economic impacts that are generated by the airport on the local economy. Washington Executive/Hyde Field generated the following impacts:

⌘ Jobs (Direct, Induced, and Indirect)	27
⌘ Personal Income (Direct, Induced, and Indirect)	\$1,171,000
⌘ Revenue	\$1,328,000
⌘ Taxes	\$121,000
⌘ Local Purchases	\$858,000

As part of this study, the economic impacts associated with the Washington Air Defense Identification Zone (ADIZ) and Flight Restriction Zone (FRZ) operations within the Maryland Statewide Aviation System were estimated and compared to the results of similar analyses conducted in 2000 and 2002.

In early 2003, the FAA implemented the ADIZ and FRZ in the interest of national security in response to the tragic events of September 11, 2001. The purpose of the ADIZ is to monitor flight activity within the Washington Tri-Area Class B Airspace. The FRZ is essentially a 15-nautical mile ring around Washington DC where general aviation is limited.

Eleven Maryland GA airports fall within the ADIZ, including:

- ∴ Bay Bridge Airport;
- ∴ Davis Airport;
- ∴ Essex Airport;
- ∴ Freeway Airport;
- ∴ Kentmorr Airport;
- ∴ Lee Airport;
- ∴ Martin State Airport;
- ∴ Maryland Airport;
- ∴ Montgomery County Airpark;
- ∴ Suburban Airport; and
- ∴ Tipton Airport.

Additionally, the following three airports fall within the FRZ:

- ∴ College Park Airport;
- ∴ Potomac Airfield; and
- ∴ Washington Executive/Hyde Field.

As a comparison to examine changes in levels of activity to airports within the ADIZ and FRZ, the similar data at airports on the perimeter of the ADIZ was also analyzed. Thirteen Maryland airports lie on the perimeter of the ADIZ, including:

- ∴ Cambridge-Dorchester Airport;
- ∴ Capt. W.F. Duke Regional Airport at St. Mary's;
- ∴ Carroll County Regional Airport;
- ∴ Cecil County Airport;
- ∴ Clearview Airport;
- ∴ Easton Airport;
- ∴ Fallston Airport;
- ∴ Frederick Municipal Airport;
- ∴ Hagerstown Regional Airport;
- ∴ Harford County Airport;
- ∴ Havre de Grace Seaplane Base;
- ∴ Massey Aerodrome; and
- ∴ Ridgely Airpark.

Two key factors were evaluated that typically indicate growth in GA airport activity: airport operations and based aircraft. Total airport operations are the sum of all take-offs and landings for local, transient, military, and commuter/charter operations. Based aircraft are simply the number of aircraft housed at the airport either in a hangar or at a tie-down.

Economic Impact of ADIZ and FRZ

Exhibits 3 and 4 present a comparison of data from previous Maryland Statewide Aviation System economic impact studies, as well as data collected from all 34 GA airports in Maryland.

Exhibit 3
Indexed Total Operations
Airports within ADIZ/FRZ, Perimeter Airports
and All MD Airports 2000-2005*

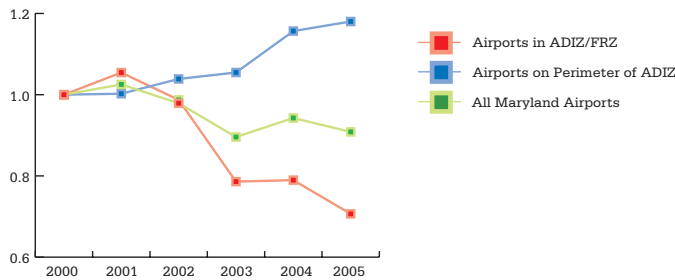
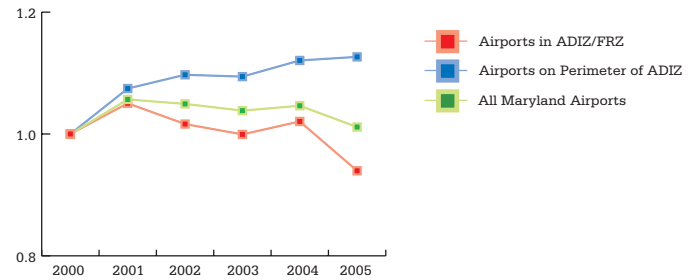


Exhibit 3 illustrates the growth of total operations and based aircraft. All three groups of airports appear to remain relatively stable from 2000 to 2001 in the wake of events of 9/11/2001. Airports in the ADIZ and FRZ showed a sharp decline in the 2002 to 2003 period, perhaps reflecting the impact of the implementation of ADIZ in February 2003. The ADIZ airports have not exhibited any recovery through 2005, and have maintained operation levels below that of the base year 2000.

Additionally, ADIZ/FRZ airports have maintained levels below that of the entire Maryland Statewide System. The airports on the perimeter of the ADIZ have shown growth over the 2002 to 2005 period, which can be attributed to growth in corporate aviation at key perimeter airports.

Exhibit 4
Indexed Based Aircraft
Airports within ADIZ/FRZ, Perimeter Airports
and All MD Airports 2000-2005*



As shown in Exhibit 4, all three sectors showed strong growth between 2000 and 2001. Airports within the ADIZ significantly lost based aircraft through 2003, while perimeter airports continued to grow. Although airports in the zones increased in 2004, they exhibited a sharp decline in 2005 and have remained below the levels of all general aviation airports in Maryland since 2001. It is to be emphasized that while the number of based aircraft is typically a key indicator of airfield activity, it is statistically difficult to prove that this decline is solely due to the ADIZ/FRZ restrictions. Airports on the perimeter have made significant capital improvements to hangars and tie-down areas, thus having the ability to accommodate an influx of new based aircraft. Similarly, airports in the zone may report that hangar and tie-down space at 100 percent capacity; however, these aircraft may be sitting idle, represented by a decline in operations.

Although it has been noted that it is statistically difficult to attribute a decline in airport activity based solely on the implementation of the ADIZ and FRZ, it is apparent that the airports within the ADIZ/FRZ are not recovering from the initial fallout of September 11, 2001 at the same rate as the perimeter airports or the entire Maryland Statewide Aviation System. Since the operational levels presented in Exhibit 3 appear to be consistent between ADIZ/FRZ airports and perimeter airports, the economic model can be used to compare the changes from 2002 to 2005 between the two sectors.

Tables 3 and 4 illustrate the economic impact of the ADIZ/FRZ, perimeter airports and the total Maryland Statewide GA System.

**Table 3
Comparison of Impacts of ADIZ/FRZ Airports
2002-2005**

ADIZ/FRZ Airports	2005	2002	Change 2002- 2005
JOBS			
Direct Jobs	1,191	1,190	1
Induced Jobs	646	526	120
Indirect Jobs	<u>382</u>	<u>735</u>	<u>(353)</u>
Total Jobs	2,220	2,451	(231)
Personal Income (Million \$)			
Direct	\$51,028	\$47,370	\$3,658
Induced	\$69,907	\$47,607	\$22,300
Indirect	<u>\$18,014</u>	<u>\$26,501</u>	<u>(\$8,487)</u>
Total Personal Income	\$138,949	\$121,478	\$17,470
Business Revenue (Million \$)	\$231,559	\$260,492	(\$28,933)
Local Purchases (Million \$)	\$33,953	\$45,001	(\$11,049)
State and Local Taxes (Million \$)	\$14,312	\$18,281	(\$3,969)

**Table 4
Comparison of Impacts of Perimeter Airports
2002-2005**

Perimeter Airports	2005	2002	Change 2002- 2005
JOBS			
Direct Jobs	1,445	1,235	210
Induced Jobs	804	507	297
Indirect Jobs	<u>775</u>	<u>865</u>	<u>(90)</u>
Total Jobs	3,024	2,607	416
Personal Income (Million \$)			
Direct	\$64,015	\$44,104	\$19,911
Induced	\$87,453	\$44,377	\$43,076
Indirect	<u>\$34,440</u>	<u>\$29,789</u>	<u>\$4,651</u>
Total Personal Income	\$185,908	\$118,270	\$67,638
Business Revenue (Million \$)	\$215,086	\$196,078	\$19,008
Local Purchases (Million \$)	\$79,564	\$59,575	\$19,989
State and Local Taxes (Million \$)	\$19,147	\$19,450	(\$303)

As presented in Tables 3 and 4, the 14 airports within the ADIZ/FRZ showed no increase or decrease in direct jobs as the number remained unchanged from 2002. Comparatively, airports on the perimeter grew by 210 direct jobs. Induced employment at ADIZ/FRZ airports grew by 120 jobs, while perimeter airports increased by 297 jobs, reflecting a higher income multiplier for the airline sector of the Maryland economy, as reported by the U.S. Bureau of Economic Analysis, RIMSII Model.

Indirect employment at ADIZ/FRZ airports fell by 353 jobs, reflecting a decline in \$11 million of local spending by airport firms. In comparison, indirect employment at perimeter airports decreased by 90 jobs, in spite of the growth in local purchases of nearly \$20 million. However, due to the increase in productivity in service, retail and manufacturing sectors of the U.S. economy since 2002, the growth in productivity in supplying industries has resulted in lower job multipliers. Therefore, less indirect jobs were supported in 2005 than in 2002.

Direct personal income at ADIZ/FRZ airports grew by \$3.7 million, reflecting the growth in average income per direct job and the overall growth in direct jobs. The induced income and consumption impact grew by \$22.3 million, reflecting a higher personal income multiplier, as estimated by the Bureau of Economic Analysis for the State of Maryland. Indirect income declined by \$8.5 million, due to the reduction in indirect jobs. Personal income at perimeter airports increased \$20 million, while induced earnings and consumption grew by \$43.1 million, reflecting the increase of 297 induced jobs. Indirect income increased by \$4.7 million despite a loss of 90 indirect jobs, which reflects the higher paying indirect jobs created in 2005 compared to the indirect jobs in 2002.

Business revenue fell by \$29 million at ADIZ/FRZ airfields, reflecting the reduction in airport activity. Conversely, perimeter airports exhibited a revenue growth of \$19 million.



20%

10%

0%