

**THE REGIONAL AND LOCAL ECONOMIC
IMPACTS OF THE BALTIMORE/WASHINGTON
INTERNATIONAL AIRPORT AND THE STATE-
WIDE GENERAL AVIATION SYSTEM**

PREPARED FOR THE:



**Maryland
Aviation
Administration**

May 9, 2001

**MARTIN ASSOCIATES
2938 COLUMBIA AVENUE, SUITE 602
LANCASTER, PA 17603
717-295-2428**

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
I. INTRODUCTION, OVERVIEW AND SUMMARY OF RESULTS	4
1. IMPACT STRUCTURE	4
2. ECONOMIC IMPACT SECTORS	7
3. DATA COLLECTION	9
4. SUMMARY OF FINDINGS.....	9
II. EMPLOYMENT IMPACTS CREATED BY BWI ACTIVITY	12
1. TOTAL JOB IMPACTS.....	12
2. DIRECT JOB IMPACTS.....	13
3. GEOGRAPHIC DISTRIBUTION OF DIRECT JOBS	16
4. INDUCED JOB IMPACT	17
5. INDIRECT JOB IMPACTS.....	17
III. REVENUE, INCOME AND TAX IMPACTS CREATED BY BWI AIRPORT ACTIVITY	18
1. REVENUE IMPACT	18
2. PERSONAL INCOME IMPACTS.....	21
3. LOCAL PURCHASES	24
4. TAX IMPACTS	24
IV. VISITOR INDUSTRY IMPACTS CREATED BY BWI PASSENGER ACTIVITY	26
1. VISITOR INDUSTRY JOB IMPACT.....	27
2. BUSINESS REVENUE IMPACT.....	28
3. PERSONAL INCOME AND TAX IMPACTS.....	29
V. RELATED JOBS AT BWI.....	30
VI. COMPARISON WITH 1998 IMPACTS CREATED BY BWI	31
VII. ECONOMIC IMPACT OF THE 35 GENERAL AVIATION AND COMMUTER AIRPORTS.....	34

EXECUTIVE SUMMARY

The Maryland Aviation Administration retained the services of Martin Associates to estimate the economic impacts of the Baltimore/Washington International Airport (BWI), and to further estimate the economic impacts of the entire state-wide aviation system, which consists of 35 general service and commuter airports as well as BWI. The purpose of the study is to defensibly quantify the economic impacts generated by passenger and air cargo activity at BWI, and to also quantify the economic impacts generated by the 35 general aviation and commuter airports. The impacts are quantified in terms of:

- Jobs
- Employee earnings
- Business revenue
- State and local taxes, and Federal airport-specific taxes.

The impacts are estimated for passenger and air cargo activity for calendar year 2000. In addition to the baseline impacts, an economic impact model has been developed for BWI as well as for the 35 other airports, which can be used to estimate the impacts associated with capital construction and expansion projects. Furthermore, the model can be used for annual updates of the impacts as well as to test the sensitivity of impacts to changes in:

- Passenger levels
- Domestic versus international passengers
- Passenger trip purpose
- Peak hour flight levels and mix of aircraft
- Labor productivity and work rules
- Freight levels
- General aviation operations.

In 1998, Martin Associates measured the economic impacts generated by passenger and air cargo activity at BWI, and the same methodology has been used to quantify the calendar year 2000 impacts. Therefore, direct comparisons can be made between the 1998 impacts and those generated by passenger and air cargo activity in the year 2000. In addition to our 1998 economic impact study for BWI, Martin Associates has developed similar impact studies for airport activity at the following airports:

- Hartsfield Atlanta International Airport
- Denver's Stapleton International Airport
- San Francisco International Airport
- Minneapolis/St. Paul International Airport
- Seattle-Tacoma International Airport
- Toronto's Lester B. Pearson International Airport

- Washington Dulles and National Airports
- San Jose International Airport
- Oakland International Airport
- Portland International Airport
- Milwaukee's General Mitchell International Airport
- Sacramento International Airport
- Harrisburg International Airport
- General Aviation and Commuter Airports in:
 - Harrisburg, PA
 - Lancaster, PA
 - Carlisle, PA
 - Milwaukee, WI
 - San Jose, CA
 - Hillsboro, OR
 - Troutdale, OR
 - Mulino, OR

Table 1 shows the economic impact of the state-wide aviation activity in the year 2000.

Table 1
Economic Impact of the Maryland State Aviation Industry

	BWI Airport Generated	BWI Visitor Generated	General Aviation	Total
JOBS				
Direct Jobs	12,030	43,471	3,163	58,664
Induced Jobs	6,369	17,375	1,554	25,298
Indirect Jobs	<u>5,692</u>	<u>NA</u>	<u>2,808</u>	<u>8,500</u>
Total Jobs	24,091	60,846	7,525	92,462
Personal Income (\$1,000)				
Direct	\$358,037	\$583,839	\$103,633	\$1,045,509
Induced	\$302,721	\$493,637	\$87,668	\$884,026
Indirect	<u>\$138,264</u>	<u>NA</u>	<u>\$75,378</u>	<u>\$213,642</u>
Total	\$799,022	\$1,077,476	\$266,679	\$2,143,177
Business Revenue (\$1,000)	\$3,780,803	\$2,762,385	\$697,126	\$7,240,314
Local Purchases (\$1,000)	\$236,188	NA	\$103,588	\$339,776
State and Local Taxes (\$1,000)	\$200,248	\$505,755	\$64,012	\$770,015
Federal Aviation Taxes(\$1,000)	\$282,909	NA	NA	\$282,909

In the year 2000, the aviation activity in the State of Maryland created the following economic impacts state-wide:

- 92,462 direct, induced and indirect jobs
- \$2.1 billion of personal wages and salaries
- \$7.2 billion of business revenue
- \$0.8 billion of state and local taxes
- \$0.3 billion of local purchases for supplies and services.

Activity at BWI created the majority of the economic impacts. In the year 2000, 19.7 million passengers used BWI, and nearly 520 million pounds of air cargo and mail moved via the airport. This activity at BWI generated the following impacts:

- 24,091 direct, induced and indirect jobs were generated for residents of the Baltimore area. Of the 24,091 jobs, 12,030 were direct jobs, while 6,369 jobs were induced throughout the region to support the purchase of goods and services by the 12,030 directly dependent employees. An additional 5,692 indirect jobs were generated in the local economy due to \$236.2 million of local purchases by firms directly dependent on airport activity.
- \$799 million of personal income and consumption expenditures were generated in the Baltimore area as a result of the airport activity in 2000.
- \$3.8 billion of business sales were generated by airport activity.
- The Federal Government received about \$283 million in airport-specific taxes from activity at BWI.
- State and local governments received \$200 million in tax revenues from airport activity.

In addition to these direct, induced and indirect impacts, it is estimated that about 60,846 direct and induced jobs were generated in the Baltimore area visitor industry due to expenditures by 4.2 million visitors to the region who arrived via BWI. The impacts of the visitors are estimated from the results of a one-week passenger survey conducted by Martin Associates as part of this study. These visitors, who include both domestic as well as international travelers, spent about \$2.8 billion on area hotels, restaurants, retail stores and entertainment establishments, which in turn generated the jobs in the Baltimore area visitor industry. As a result of visitors arriving via the airport, \$505.8 million of state and local tax revenues were generated.

I. INTRODUCTION, OVERVIEW AND SUMMARY OF RESULTS

The Maryland Aviation Administration retained the services of Martin Associates to measure the economic impact of airport activity generated by the Baltimore/Washington International Airport (BWI) as well as the airport activity at the 35 additional general aviation and commuter airports located throughout the State of Maryland. The base year of the analysis is calendar year 2000. 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, including the impact of visitors to the Baltimore/Washington metropolitan area who used BWI. The impacts of commercial airline passenger activity, air cargo activity, military and general aviation activity are also measured.

The methodology used in this analysis has been used to assess the economic impacts created by airport activity at Hartsfield Atlanta International Airport, San Francisco International Airport, Seattle-Tacoma International Airport, Portland International Airport, Minneapolis/ St. Paul International Airport, Toronto's Lester B. Pearson International Airport, Washington, DC's Reagan National Airport and Virginia's Dulles International Airport, Oakland International Airport, Sacramento International Airport, Milwaukee's General Mitchell International Airport, Harrisburg International Airport, and San Jose International Airport.

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 BWI as well as each of the 35 other 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 total passenger and air freight levels, changes in the number of flight operations, changes in domestic and international passenger levels, and changes in work rules by airlines. Also, the model can be used to test the economic impacts of various capital investment and airport expansion projects.

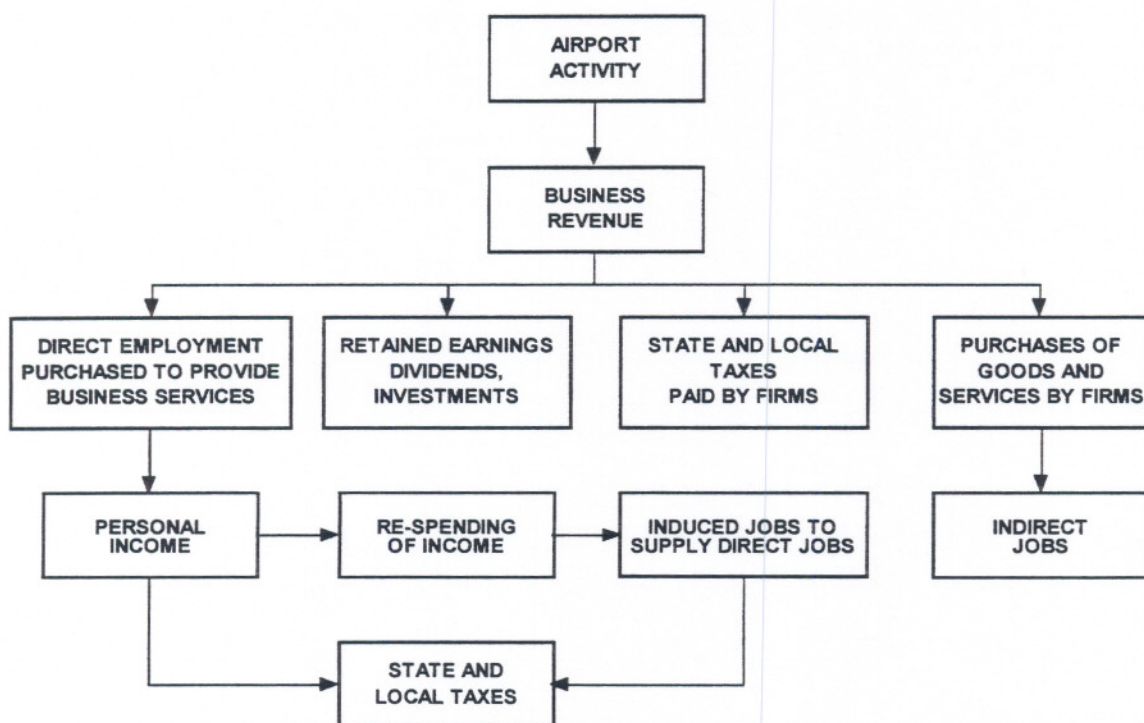
The remainder of this chapter summarizes the methodology, highlights key assumptions, and summarizes the major findings.

1. IMPACT STRUCTURE

Activity at a commercial airport contributes to the local and state economy by generating business revenue to local and national firms providing air passenger service, freight service and support services to the airport and the airlines. These firms, in turn, provide employment and income to individuals, and pays taxes to state and local governments. Similarly, activity at general aviation airports and commuter airports supports jobs and income with those providing services at the airport as well as for airport tenants using the airport runways for corporate and business related operations. Exhibit 1 shows how air traffic activity at BWI and other general aviation and commuter 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.

Exhibit 1
Flow of Economic Impacts Generated by
Airport Activity



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 commercial and general 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. Landing fees and terminal rents paid by airlines provide for some of the costs of operation of the airport and capital costs of new construction.

1.2 Employment Impact

The employment impact of aviation activity consists of four 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.
- Related employment impact - jobs with firms in the regional economy. These firms use BWI for air cargo shipments and receipts. Related jobs are not as directly dependent upon the airport as are the direct and induced jobs, but reflect the importance of BWI as a catalyst for economic development. At some level of reduced air service, this employment could be lost to other areas.

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. Also included in the tax impact are Federal aviation-specific taxes generated by air passenger and air cargo activity at the Airport.

The four types of impacts outlined above are estimated for calendar year 2000 activity at BWI and the 35 general aviation and commuter airports in the State of Maryland.

2. ECONOMIC IMPACT SECTORS

An airport is a diverse economic system. The businesses that have employees at commercial airports such as BWI as well as at general aviation airports cover a spectrum of trade and service sectors. For the purposes of this study, the airport system is divided into five sectors:

- Airline/airport service
- Freight transportation
- Passenger ground transportation
- Contract construction/consulting services
- Visitor industry services.

Each of these sectors covers a variety of activities. A discussion of these five categories is provided below, with a description of the major participants in each.

2.1 Airline/Airport Service Sector

The airline/airport service sector consists of airlines providing passenger services, general aviation, and firms providing support services to the airlines, passengers, and to the airport. This group consists of the following participants:

- Passenger Airlines
- General Aviation, (i.e., corporate hangars and business aircraft, not-for-profit aviation services, flying clubs, etc.)
- Airport Administration
- Catering Firms
- Janitorial Firms
- Sky Caps
- Security Firms
- Aviation Service Firms (including fixed base operators)
- Airport Retail Tenants (i.e., newsstands, retail shops, and food concessions)
- Federal Government Agencies (i.e., F.A.A., Post Office, and U.S. Customs)
- Military Bases, including the Air National Guard and the Air Force Reserves
- Parking and Miscellaneous.

Jobs in this category are typically located on the airport property.

2.2 Freight Transportation Sector

Freight transportation includes freight airlines, freight forwarders, and trucking firms involved in transporting air cargo. The air cargo consists of air freight, express packages and mail transported on dedicated freight airlines and in the cargo section of passenger airlines. Included in this group are air couriers, freight forwarders, and common carrier trucking firms located throughout the Baltimore area. Jobs in this category are located both on and off the airport.

2.3 Passenger Ground Transportation Sector

Passenger ground transportation consists of car rental firms and other ground transportation modes, such as buses, taxis and limousines. This group covers all transportation of individuals to and from the airport and includes both drivers and supporting reservation and maintenance employees.

2.4 Contract Construction and Consulting Sector

Individuals employed in this group include those providing construction and remodeling work at BWI and the other airports, as well as architects and engineers providing planning and design services.

2.5 Visitor Industry Services Sector

Both domestic and international passengers arrive in the Baltimore area via BWI for several purposes, including business, pleasure, and conventions. As a result of these out-of-town residents purchasing lodging, food and entertainment, jobs are created in the service and retail sectors in the Baltimore and neighboring areas. To evaluate the impacts of visitors using BWI, Martin Associates conducted a one-week, in-terminal passenger survey. In addition, visitors also arrive at the commuter airports of Greater Cumberland Airport, Hagerstown Regional Airport and Salisbury-Ocean City Airport. The impacts of the visitors arriving via the three commuter airports were estimated based on the profiles of domestic passenger expenditures and trip characteristics developed from the passenger surveys conducted at BWI. No specific passenger surveys were conducted at the commuter airports.

3. DATA COLLECTION

Impacts were estimated on the basis of interviews with firms in the five economic impact categories described above. A total of 314 firms were contacted, representing a 100% coverage of tenants and firms providing services at BWI and the 35 general aviation and commuter airports. Table 2 shows the number of interviews by type of firm.

Table 2
Summary of Interview Responses

IMPACT CATEGORY	NUMBER OF INTERVIEWS
CATERING	1
FREIGHT AIRLINES/AIR COURIERS	21
GENERAL AVIATION/FBO'S (BWI)	8
RETAIL CONCESSIONS	20
RENTAL CARS	7
GOVERNMENT AGENCIES	15
AIRLINES	24
TAXIS/VANS	5
SECURITY/SKYCAPS/CUSTODIAL	9
PARKING	3
GENERAL AVIATION.COMMUTER AIRPORTS	<u>201</u>
TOTALS	<u>314</u>

4. SUMMARY OF FINDINGS

The key economic impacts generated by BWI and the 35 general aviation and commuter airports are presented in Table 3.

Table 3
Economic Impacts of Aviation
Activity in the State of Maryland

	Jobs				Personal Income (\$1,000)				Revenue (\$1,000)	Taxes (\$1,000)	Purchases (\$1,000)
	Direct	Induced	Indirect	Total	Direct	Induced	Indirect	Total			
BWI on Site	12,030	6,369	5,692	24,091	\$358,037	\$302,721	\$138,264	\$799,022	\$3,780,803	\$200,248	\$236,188
BWI Visitors	43,471	17,375		60,846	\$583,839	\$493,637		\$1,077,476	\$2,762,385	\$505,755	
BWI Total	55,501	23,744	5,692	84,937	\$941,876	\$796,358	\$138,264	\$1,876,498	\$6,543,188	\$706,003	\$236,188
Baltimore Airport	14	7	16	36	\$296	\$250	\$412	\$958	\$600	\$300	\$535
Bay Bridge Airport	9	5		13	\$271	\$229		\$500		\$112	
Bennett Airport	7	4	1	11	\$167	\$141	\$17	\$325	\$425	\$91	\$24
Cambridge/Dorchester	23	28	12	62	\$858	\$725	\$303	\$1,886	\$3,621	\$385	\$377
Capt. Walter Francis Duke	26	15	35	76	\$955	\$807	\$901	\$2,663	\$1,978	\$628	\$1,139
Carroll County	14	6	125	145	\$242	\$205	\$3,610	\$4,057	\$1,441	\$1,207	\$5,351
Cecil County Airport	11	4	168	183	\$129	\$109	\$6,718	\$6,956	\$193	\$1,523	\$1,750
Clearview Airport	1	1	1	3	\$22	\$19	\$15	\$56		\$20	\$54
College Park Airport	23	11	40	74	\$567	\$479	\$1,042	\$2,088		\$617	\$1,320
Crisfield-Somerset Airport	2	1		3	\$42	\$36		\$78		\$24	
Davis Airport	2	1		3	\$44	\$37		\$81		\$24	
Easton Airport	134	77	992	1,203	\$4,763	\$4,027	\$23,790	\$32,580	\$12,483	\$10,002	\$36,184
Essex Skypark	2	1		3	\$42	\$36		\$78		\$24	
Fallston Airport	4	3		7	\$180	\$152		\$332		\$55	\$0
Frederick Municipal Airport	477	299	253	1,028	\$20,043	\$16,947	\$7,308	\$44,298	\$70,906	\$8,547	\$10,608
Freeway Airport	25	11	8	44	\$500	\$423	\$192	\$1,115	\$1,050	\$364	\$250
Garrett County Airport	2	1		3	\$42	\$36		\$78		\$24	
Greater Cumberland on Site	40	24		64	\$1,641	\$1,387	\$1	\$3,029		\$189	\$1
Greater Cumberland Visitor	28	11		39	\$317	\$314		\$631	\$1,756	\$323	
Greater Cumberland Total	68	35		103	\$1,958	\$1,701	\$1	\$3,660	\$1,756	\$512	\$1
Hagerstown Regional on Site	246	137	6	389	\$8,174	\$6,911	\$152	\$15,237	\$18,623	\$3,228	\$200
Hagerstown Regional Visitor	123	50		173	\$1,649	\$1,394		\$3,043	\$7,804	\$1,435	
Hagerstown Regional Total	369	187	6	562	\$9,823	\$8,305	\$152	\$18,280	\$26,427	\$4,663	\$200
Harford County Airport	7	5		12	\$384	\$325	\$718	\$1,427	\$535	\$157	\$14
Havre de Grace Seaplane Base	4	2		6	\$85	\$72		\$157		\$49	
Kentmorr Airport	1	1		2	\$21	\$18		\$39		\$12	
Lee Airport	6	3	14	22	\$116	\$98	\$385	\$599		\$185	\$532
Martin Airport	895	557	1,015	2,467	\$37,026	\$31,305	\$26,360	\$94,691	\$515,387	\$20,503	\$38,972
Maryland Airport	29	16	18	62	\$912	\$771	\$300	\$1,983	\$4,750	\$513	\$1,078
Mexico Farms Airport	1			1	\$21	\$18		\$39		\$12	
Montgomery County Airport	87	51	64	202	\$3,266	\$2,761	\$1,638	\$7,665	\$11,533	\$1,675	\$2,507
Ocean City Municipal Airport	15	8	7	30	\$418	\$354	\$191	\$963		\$252	\$239
Potomac Airfield	31	16	21	67	\$909	\$769	\$520	\$2,198	\$2,246	\$560	\$941
Ridgely Airport	3	1	2	6	\$63	\$54	\$60	\$177		\$51	\$70
Salisbury-Ocean City on Site	438	17		454	\$12,458	\$10,533	\$426	\$23,417	\$14,657	\$5,665	\$1,022
Salisbury-Ocean City Visitor	391	157		548	\$5,231	\$4,423		\$9,654	\$24,756	\$4,551	
Salisbury-Ocean City Total	829	174		1,002	\$17,689	\$14,956	\$426	\$33,071	\$39,413	\$10,216	\$1,022
South River Seaplane Base	1	1		2	\$21	\$18		\$39		\$12	
Suburban Airport	4	2	2	8	\$120	\$101	\$43	\$264		\$65	\$57
Tipton Airport	3	2	3	8	\$81	\$68	\$79	\$228		\$63	\$91
Washington Executive/Hyde Field	37	23	7	68	\$1,557	\$1,316	\$197	\$3,070	\$2,382	\$565	\$272
TOTALS	58,664	25,298	8,499	92,461	1,045,509	884,026	213,642	\$2,143,177	\$7,240,314	\$770,015	\$339,776

(CY2000 data)

The remainder of this report is organized as follows. Chapter II details the job impacts, and Chapter III describes the business revenue, employee earnings, and tax impacts. Chapter IV presents the impacts of the 4.2 million visitors to the Baltimore area. Chapter V discusses the impact of BWI on regional air cargo shippers. Chapter VI compares the changes in impacts at BWI since 1998. Chapter VII describes the economic impacts of the 35 general aviation and commuter airports.

II. EMPLOYMENT IMPACTS CREATED BY BWI ACTIVITY

In this chapter, the employment generated by BWI Airport activity in the year 2000 is described. The chapter is organized as follows:

- First, employment that is totally or partially dependent on the activities at BWI is estimated.
- Second, the subset of total employment that is judged to be totally dependent on airport activity is analyzed in the following ways:
 - Jobs are estimated in terms of the four economic impact sectors and for job classifications within these categories. Visitor industry sector impacts are addressed separately in Chapter IV.
 - Jobs are estimated by type of airport activity, i.e. passenger, general aviation, and air cargo activity.
 - Job impacts are allocated to counties and cities within the Baltimore region based on the residence of those directly dependent upon airport activity.
- Finally, induced and indirect jobs are estimated.

1. TOTAL JOB IMPACTS

In the year 2000, 84,937 Baltimore and Washington area residents held jobs that were in some way related to activity at BWI. Of these 84,937 jobs:

- 12,030 direct jobs are dependent upon activity at BWI. These jobs would be discontinued immediately if airport activity ceased. Also, these jobs would be impacted as a result of changes in number of flights and passenger levels.
- 6,369 induced jobs are created in the region due to the purchases of goods and services within the region by those 12,030 directly dependent upon activity at BWI.
- 5,692 indirect jobs are generated in the local economy due to the \$236.2 million of local purchases for office supplies, maintenance and repair work, communications and utilities, professional services, fuel, etc., by those firms completely dependent upon the airport.

- 60,846 visitor industry jobs are created in the region as a result of visitors arriving via BWI. Of these jobs, 43,471 jobs are created with hotels, restaurants, retail outlets, entertainment and recreational establishments due to direct expenditures by visitors in the Baltimore area who have arrived via the Airport. The remaining 17,375 jobs due to visitors' expenditures are supported by regional purchases of the 43,471 individuals holding jobs directly created due to expenditures by visitors using the Airport. Chapter IV presents a more detailed discussion of the job impacts created due to visitor expenditures.

2. DIRECT JOB IMPACTS

As Exhibit 2 shows, 77 percent of the 12,030 jobs directly generated by airport activity in 2000 are concentrated in the airline/airport service category, followed by 11 percent with the ground transportation sector, and 8 percent with construction contractors involved in the capital expansion projects at BWI.

Exhibit 2
Direct Job Impacts by Sector
BWI

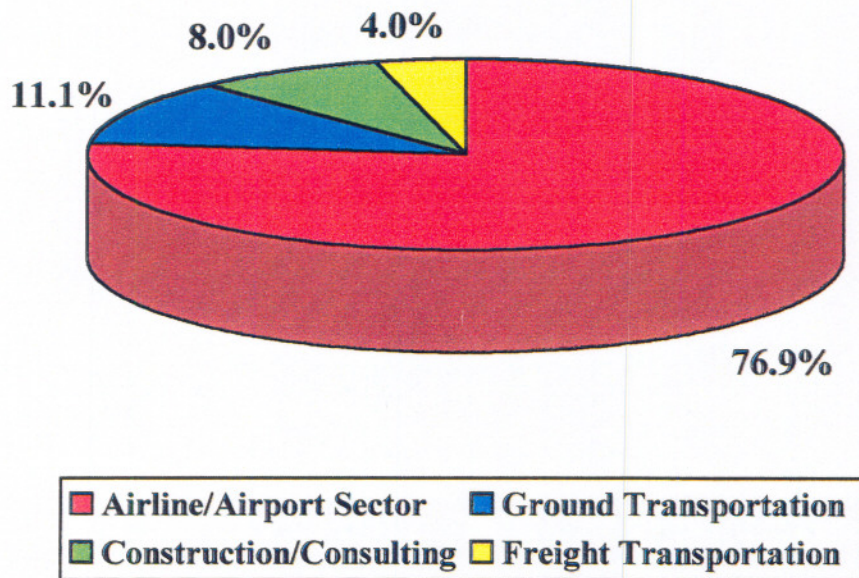


Table 4 shows the distribution of employment within each major sector. More than 5,700 jobs with passenger airlines are concentrated in the first category. The jobs include flight crews, administration, ticket agents, ramp employees, and maintenance workers.

Table 4
Direct Job Impacts by Category

JOB CATEGORY	DIRECT JOBS
AIRLINE/AIRPORT SERVICES SECTOR	
Passenger Airlines*	5,701
Catering	260
Government Agencies	432
Airport Administration	459
Security/Skycaps	496
Aviation Services/FBO's	567
Retail Concessions	702
Custodial	352
Parking	166
Miscellaneous	112
SUBTOTAL	9,247
FREIGHT TRANSPORTATION	485
GROUND TRANSPORTATION	
Taxi/Limos/Vans	720
Rental Cars	617
SUBTOTAL	1,337
CONSTRUCTION/CONSULTING	961
TOTAL	12,030

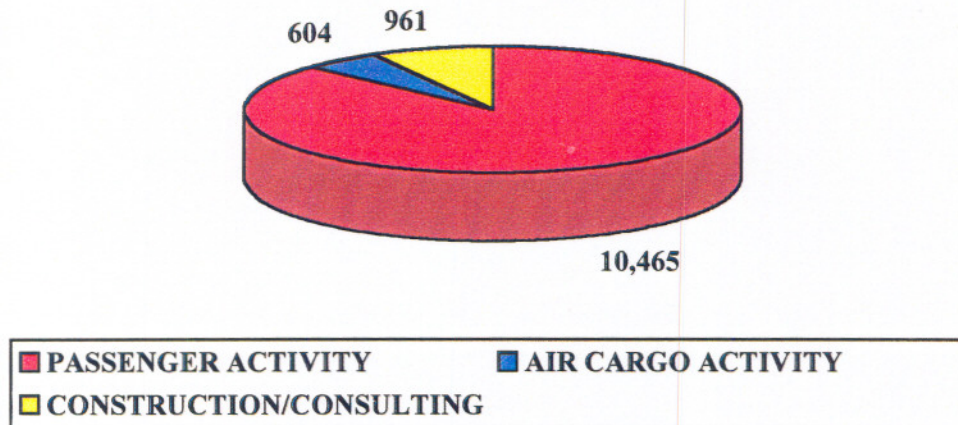
2.1 Direct Job Impacts by Type of Activity

The direct jobs are next allocated to types of activity at BWI:

- Passenger Activity
- Air Cargo
- Construction.

Exhibit 3 shows the distribution of direct jobs by type of activity.

Exhibit 3
Distribution of Direct Jobs by Type of Activity



2.1.1 Direct Jobs Dependent upon Passenger Activity

A total of 10,465 direct jobs were generated by commercial airline passenger activity. Of these 10,465 direct jobs, 5,701 jobs are with the airlines. These airline jobs include flight crew and pilots living in the Baltimore area who are based out of BWI, ticket agents, dispatchers, equipment mechanics and technicians, custodial workers who are employees of the airlines (and not contractors to the airlines), airline system maintenance facility employees, and airline management and clerical jobs. It is clear from this diverse set of jobs with airlines that certain jobs are dependent upon the number of flights at BWI, others are dependent upon the number of passengers at the airport, while still other jobs, such as pilots and crew based out of Baltimore are dependent upon airline corporate decisions and airline system activity throughout the U.S.

As a result of this diversity in the types of jobs with airlines and their dependency upon the airport activity, it is clear that changes in the level of airport activity will not have a proportionate impact on the level of total direct airline jobs. For example, the airline flight attendants living in the Baltimore area, and based out of BWI, as well as system maintenance facilities, are not necessarily dependent upon the level of flights in and out of BWI, but instead on the growth in the specific airline system of which they are employees. In contrast, certain jobs are directly dependent on the number of flights at BWI, such as the equipment service technicians and dispatchers.

Based on analysis of employee job classifications for the airlines servicing BWI, it was estimated that 32 percent of the direct airline employment would be totally dependent upon the actual number of flights and passengers at BWI. The remaining 68 percent of airline employees would include flight crews based in Baltimore (but dependent upon airline system-wide performance) and airline management stationed at BWI.

In 2000, 412,198 passengers boarded international flights at BWI. It is estimated that international passenger activity at BWI supported 335 direct jobs.

2.1.2 Air Cargo Transportation Job Impacts

In 2000, 432.4 million pounds of air freight and 88.1 million pounds of mail were loaded and unloaded upon commercial air carriers and dedicated air cargo carriers at BWI. Of the 12,030 jobs directly generated by airport activity, 604 are directly generated as a result of total air cargo activity.

2.1.3 Construction/Consulting Job Impacts

In the year 2000, \$106.6 million was spent by BWI and the State of Maryland for construction activities, consulting and engineering services. These expenditures generated 961 direct jobs.

3. GEOGRAPHIC DISTRIBUTION OF DIRECT JOBS

In order to estimate the local economic impact created by airport activity, data on residency of employees was collected from the interviews with airport tenants, airport employee records, and interviews with the leading airlines serving BWI. The 12,030 direct jobs were then allocated based on city and county of residence. Table 5 shows the distribution of job impacts by Baltimore City and other counties in the state.

Table 5
Distribution of Job Impacts by
City and County of Residence

PLACE OF RESIDENCE	Percent	Direct Jobs
Baltimore City	27.0%	3,252
Anne Arundel County	35.6%	4,277
Baltimore County	15.3%	1,845
Howard County	6.5%	778
Harford County	1.6%	186
Other Maryland	5.1%	612
Other U.S.	9.0%	1,079
TOTAL	100.0%	12,030

As this exhibit shows, more than one-quarter of the direct employees reside in the City of Baltimore, while nearly 36 percent live in Anne Arundel County.

4. INDUCED JOB IMPACT

A portion of the income received by those 12,030 directly employed due to airport activity is saved, another portion is used to pay federal, state and local taxes, while another portion is used to purchase goods and services from firms located in the Baltimore area, as well as out-of-region firms. The purchase of goods and services from Baltimore area firms creates induced jobs for area residents in the firms supplying the goods and services. Furthermore, those individuals supplying the goods and services also receive income from their employers and use a portion of it for additional purchases from firms located in the area. This "trickle-down" effect of an initial income expenditure results in a multiplier effect throughout the Baltimore regional economy known as the personal income multiplier. As a result of this re-spending, 6,369 additional jobs in other sectors of the regional economy are created. These jobs are with state and local government agencies (excluding those state and local government jobs included as direct impacts i.e., airport administration), financial/business and educational services, retail, housing/construction, transportation services (including service stations, auto parts suppliers, automobile dealers, body shops, etc.), entertainment/recreational services, apparel and health care services.

5. INDIRECT JOB IMPACTS

In addition to these induced jobs created due to purchases by the 12,030 individuals directly employed due to activity at BWI, other jobs in the Baltimore regional economy will be created indirectly due to the purchase of goods and services by the firms involved in airport activity.

For example, airlines purchase such items as fuel, catering services, parts and office supplies from local firms, thereby creating jobs in these supplying industries. Similarly, the airport itself purchases such services as contract construction, utilities, and maintenance services from local suppliers, also creating jobs in the local economy. For the most part, the jobs resulting from such purchases are included in the direct job impacts. For example, the 260 jobs with caterers, the 567 jobs with suppliers of aircraft services, (including fixed based operators, fuel handlers, and parts suppliers), and the 961 jobs with contract construction and consulting firms are all included as direct job impacts. In some studies, impacts in these supplying industries are included as indirect jobs and measured through the use of a regional input/output model. For the purposes of this study, a more detailed assessment of jobs in the supplying industries was more appropriate since many are located on the airport facility and these impacts are considered as direct job impacts.

In addition to these purchases, another \$236.2 million of local purchases were made by the firms dependent upon the airport. These local purchases include purchases for goods, maintenance and repair services, utilities and communications, transportation, insurance and fueling. The \$236.2 million of local purchases supported 5,692 indirect jobs.

III. REVENUE, INCOME AND TAX IMPACTS CREATED BY BWI AIRPORT ACTIVITY

The movement of passengers and freight via BWI generates revenue for firms in each of the five categories of airport-related activity. For example, in the airline/airport service category, revenue is received by catering firms providing services to the airlines, and by airport tenants who sell retail merchandise to passengers in the airport. In the freight transportation category, airlines receive revenue from moving the air cargo to and from the airport and freight forwarders receive revenue from arranging air transportation for the cargo. Similarly, the rental car agencies and the firms providing ground transportation receive revenue from transporting passengers to and from the airport, while contract construction and consulting firms receive revenue from the airport and airlines that have contracted these services. In the hotel/restaurant/visitors service category, local service and retail firms receive revenue from passengers staying overnight in the Baltimore area.

Revenue generated by airport activity is dispersed throughout the economy in several ways. For example, gross revenue is used to pay employee salaries and the whole range of taxes, it is distributed to stockholders, and it is used for purchases of goods and services (as described in the discussion of indirect job impacts in the last chapter). Only part of this revenue can be traced geographically with any degree of accuracy, the portion of the revenue paid out in salaries and state and local taxes. These impacts are addressed in separate sections of this chapter.

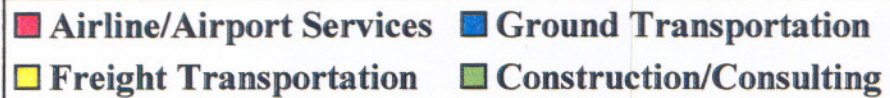
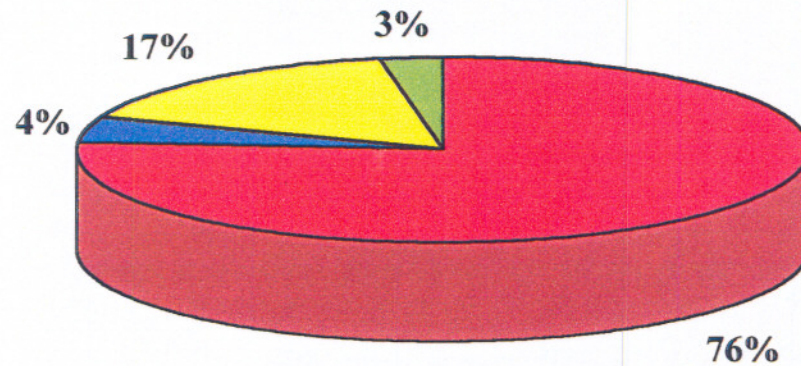
1. REVENUE IMPACT

It is useful to estimate the revenue received by each category of firms involved with airport activity because the distribution is quite different from that of employment. However, only a portion of the revenue can be definitely traced to uses within the Baltimore regional economy. The portion of revenue paid in salaries and re-spent within the Baltimore regional economy or paid in taxes by individuals, and state and local taxes paid by firms, represents an impact that can be traced as remaining in the regional economy.

1.1 Revenue Impact by Sector

In the year 2000, passenger, air cargo and airport construction activity generated \$3.8 billion of business revenue to firms providing services at the airport. Exhibit 4 indicates the distribution, by economic impact sector, of the \$3.8 billion of revenue generated by airport activity at BWI.

Exhibit 4
Distribution of Revenue
by Sector



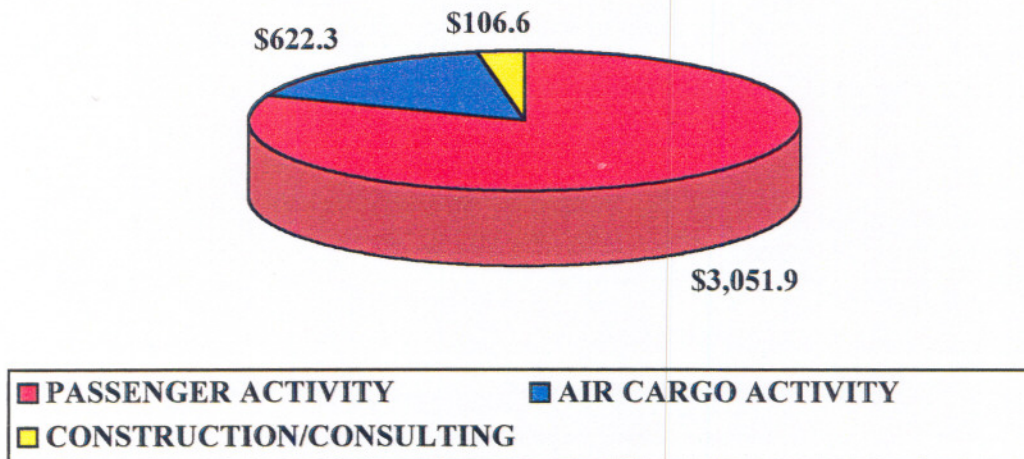
As with the employment impact, the majority of revenue generated by airport activity is concentrated in the airline/airport service category, followed by 17 percent with the freight transportation sector.

1.2 Revenue Impact by Type of Activity

The \$3.8 billion revenue impact is allocated by type of airport activity in Exhibit 5:

- Passenger Activity
- Air Cargo Activity
- Construction and Consulting Activity.

Exhibit 5
Distribution of the \$3.8 Billion Revenue Impact
by Airport Activity
(Millions \$)



1.2.1 Revenue Impact Generated by Passenger Activity

Passenger activity at BWI generated nearly \$3.1 billion of revenue to businesses providing services to passengers on commercial airlines. The majority of this revenue impact was received by the airlines from passengers enplaning at Baltimore. This is based on estimated revenue per enplaning passenger provided to Martin Associates during the airline interviews.

1.2.2 Revenue Impacts Generated by Air Cargo Activity

The 432.4 million pounds of air freight and the 88.0 million pounds of air mail handled at BWI in 2000 generated \$622.3 million of revenue to the airlines carrying the cargo, and the trucking companies and couriers. The revenue impact for the air cargo is based on estimated revenue per pound of enplaned air freight and air mail. The average revenue per pound estimates of air freight and mail are based on interviews with couriers as well as commercial airlines carrying air freight.

1.2.3 Revenue Impacts Generated By Construction and Consulting Activity

In the year 2000, \$106.6 million was spent on airport construction/expansion activities and consulting/engineering services.

2. PERSONAL INCOME IMPACTS

An estimated total of \$358.0 million was paid in wages and salaries to the 12,030 direct employees. This income impact is estimated based on the average wages and salaries for each job category multiplied by the corresponding job impact in that category. The spending of this personal income within the Baltimore area creates the additional employment estimated as induced jobs in Chapter II, which results in an additional \$302.7 million of personal income and purchases.

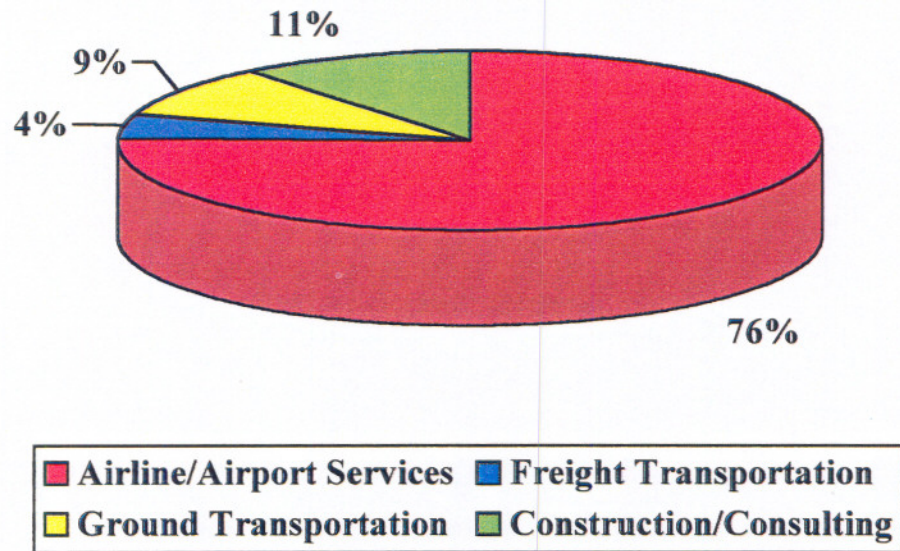
Responding of income within a region is measured by a regional income multiplier. The size of the multiplier varies by region depending on the proportion of regional goods and services purchased by individuals. The higher this percentage, the lower the income leakage out of the region. Based on data provided by the Bureau of Economic Analysis, for every one dollar earned by individuals in the Baltimore area, another \$.85 is spent in the region. Hence, the personal income multiplier for the Baltimore regional economy is 1.85, and was used to estimate the total income and consumption impact of \$660.8 million as a result of airport activity in the year 2000.

It is to be emphasized that the re-spending effect measures the total responding impact in the Baltimore region. The induced jobs, which are generated by this responding of the direct income, only include jobs generated at the retail and wholesale level due to consumer purchases, since it is assumed that these jobs will most likely occur in the Baltimore region. In addition to these induced retail and wholesale jobs, there are also additional induced and indirect jobs created to support purchases by those induced jobs in the wholesale and retail sectors, i.e., a second round of induced and indirect jobs. These second level induced and indirect jobs are not estimated, since it is not possible to identify with any degree of defensibility the geographic location where these second round induced and indirect jobs are created. Because the total number of induced and indirect jobs (second, third and fourth levels, etc.) generated by airport activity is not estimated, it is not possible to divide the induced income (\$302.7 million) by the estimated induced jobs (6,369) to estimate the salary and wage income associated with the estimated induced jobs. To do so would result in a gross overestimation of the personal income associated with the induced jobs.

2.1 Income Impact by Sector

The distribution of the \$358 million of personal income earned directly is distributed among the airport sectors as illustrated in Exhibit 6.

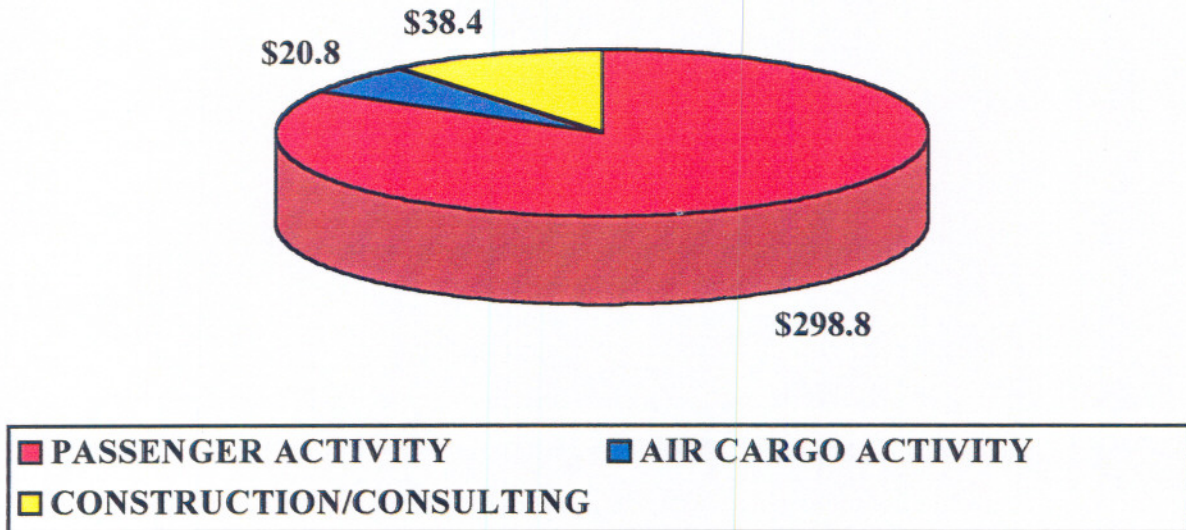
Exhibit 6
Distribution of Personal Income by Sector



2.2 Distribution of the Income Impact by Type of Activity

The distribution of the \$358.0 million personal income impact by type of activity is presented in Exhibit 7.

Exhibit 7
Distribution of the Direct Personal Income Impact
by Type of Airport Activity
(Millions \$)



2.2.1 Income Impact of Passenger Activity

Passenger activity generated 10,465 direct jobs. These direct employees in turn received \$298.8 million of personal income.

2.2.2 Income Impact Created by Air Cargo Activity

In 2000, air cargo activity at BWI created 604 direct jobs. These directly employed individuals in turn received about \$20.8 million in annual salaries and wages.

2.2.3 Income Impact Created by Construction Activity

The 961 direct jobs generated by construction and consulting activity at the airport received \$38.4 million of wages and salaries.

3. LOCAL PURCHASES

A total of \$236.2 million of local purchases were made by airlines and tenants of the airport. These purchases supported the 5,692 indirect jobs created by airport activity.

4. TAX IMPACTS

Airport activity in 2000 generated government revenue through an assortment of tax payments by Airport businesses and employees. The tax impacts are estimated at the state and local government levels. Federal aviation-specific taxes are estimated for domestic passengers boarding flights at BWI, for international passengers using the airport and for air cargo loaded on planes. The Federal aviation-specific taxes on cargo, departing international passengers and domestic passengers are paid to the Federal Aviation Trust Fund, which is in turn used to finance airport development throughout the United States.

To estimate the state and local tax impact, state and local individual tax indices were developed from data collected by Martin Associates. Total tax revenues collected in fiscal year 2000 were identified for each state, county and municipal tax levied. The ratios of individual taxes to state employment were then estimated and used as an index in estimating the taxes generated by airport activity. Tax revenue data by type of tax was collected from the State of Maryland, Comptroller of the Treasury, Bureau of Revenue Estimates. State employment was provided by the State of Maryland, Department of Labor, Licensing and Regulation.

Using these state and local tax indices, it is estimated that activity at BWI generated \$200.2 million of state and local tax revenues. Table 6 shows the breakdown of the state and local tax impacts.

Table 6
State and Local Tax Impacts
(Million \$)

TAX TYPE	MILLIONS
STATE	\$82.7
COUNTY	\$106.5
MUNICIPAL	\$11.0
TOTALS	\$200.2

Federal aviation-specific taxes were estimated based on the appropriate tax formulas. The domestic passenger tax is based on an ad valorem tax levied on enplaned domestic passenger revenue. The international departure tax is based on a tax per enplaning international passenger, while the INS/Customs tax is based on a tax levied on deplaning international passengers. The federal air cargo tax is based on an ad valorem tax levy on the value of enplaned air cargo. The average freight value of air cargo was provided to Martin Associates by air cargo carriers. As a

result of the airport activity, \$279.8 million in tax revenues were paid to the Federal Government. Table 7 provides the detailed breakdown of the Federal aviation-specific taxes.

Table 7
Federal Aviation-Specific Tax Impacts
(Million \$)

AVIATION TAXES	MILLIONS \$
DOMESTIC PASSENGER	\$234.5
AIR CARGO	\$37.7
INTERNATIONAL DEPARTURE TAX	\$2.5
INS TAX	\$5.1
TOTAL	\$279.8

IV. VISITOR INDUSTRY IMPACTS CREATED BY BWI **PASSENGER ACTIVITY**

The impact of visitors on the local and regional economy is measured in terms of jobs, income, revenue and taxes created in the hotels, retail establishments, entertainment activities, and transportation service firms.

Individuals visit the Baltimore area for a variety of reasons, including business, pleasure, and for participation in conventions. Furthermore, both domestic and international visitors use the airport. These visitors purchase hotel rooms, pay for meals and entertainment, and make retail purchases while in the Baltimore area. These purchases of goods and services stimulate the local economy, in turn generating jobs with hotels, restaurants, retail outlets, and local entertainment establishments. Those individuals employed in the Baltimore visitor industry due to visitors' purchases receive income. This income is re-spent in the local economy generating induced jobs in the regional economy.

The magnitude of the economic impact generated by visitors using BWI varies directly with the volume of out-of-town visitors and the length of time the visitors stay in the Baltimore area. Also, the impacts depend upon the amount of money spent by visitors on a daily basis, as well as the types of purchases made. The volume of air visitors to the area depends upon the number of origin and destination passengers compared to connecting passengers, as well as the number of out-of town airport users versus the number of local resident users of the airport. The length of time visitors spend in Baltimore, as well as how they spend their money, further depends upon the purpose of the trip to Baltimore, as well as whether the visitor is a domestic air traveler or an international visitor. For example, domestic business travelers tend to spend more per day on hotels than a visitor on a pleasure trip, but the pleasure traveler may spend more on retail and entertainment than the business traveler, and stay in the Baltimore area for a longer period of time.

To estimate the economic impact of visitors arriving via BWI, Martin Associates conducted a 500 passenger in-terminal intercept survey of enplaning passengers. The passenger survey sample was selected to parallel the distribution of passengers by the key air routings accounting for 75 percent of the passenger traffic at BWI. The survey results were used to develop passenger characteristics, including trip purpose, spending patterns and length of time spent in the Baltimore area.

In the year 2000, about 9.9 million passengers boarded commercial aircraft at BWI. Of the 9.9 million enplaning passengers, about 16.5 percent were connecting to other flights, and spent no time in the Baltimore area as part of the trip. Furthermore, about 51 percent of the enplaning passengers were not residents of the Baltimore area. Therefore, of the 9.9 million enplaning passengers at BWI, about 4.2 million passengers were not residents of the Baltimore area and were not connecting to other flights at Baltimore. It is the travel and spending characteristics of these 4.2 million visitors that will contribute to the local and state economy through lodging, retail purchases, eating in restaurants,

and local transportation services. Table 8 shows the purpose of the trip of the 4.2 million non-resident visitors arriving via air.

Table 8
Estimated Non-Resident Visitors by
Purpose of Trip

TRIP PURPOSE	ENPLANEMENTS
DOMESTIC BUSINESS	1,693,077
DOMESTIC PLEASURE	2,318,003
INTERNATIONAL BUSINESS	132,507
INTERNATIONAL PLEASURE	<u>73,600</u>
TOTAL VISITORS	4,217,187

Table 9 shows the average length of stay and average daily expenditures by purpose of trip. As this table indicates, international business travelers tend to spend more on a daily basis, followed by domestic business travelers. Domestic pleasure travelers spend the longest time in the Baltimore area, followed by international pleasure travelers.

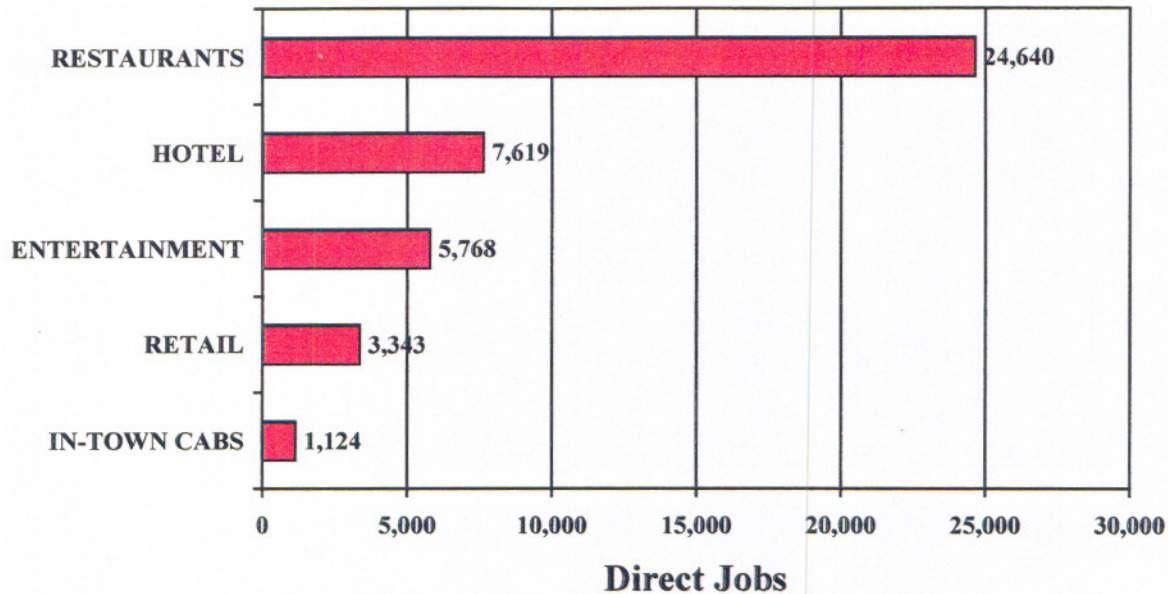
Table 9
Visitor Characteristics
Length of Stay and Daily Expenditures

TRIP PURPOSE	LENGTH OF STAY DAYS	EXPENDITURES PER DAY
DOMESTIC BUSINESS	2.9	\$198
DOMESTIC PLEASURE	5.6	\$116
INTERNATIONAL BUSINESS	3.8	\$287
INTERNATIONAL PLEASURE	4.6	\$137

1. VISITOR INDUSTRY JOB IMPACT

Using the results of the passenger survey, the 4.2 million visitors arriving via BWI are estimated to have spent about \$2.8 billion in the Baltimore area for lodging, food, entertainment, and transportation. This spending supported 43,471 direct jobs in the Baltimore area. Exhibit 8 summarizes these direct visitor industry impacts.

Exhibit 8
Direct Job Impacts Due to Visitors
Arriving Via the Airport



The majority of the impacts are generated in area restaurants, followed by jobs with area hotels and motels. Nearly 6,000 jobs are created with entertainment/recreational activities and more than 3,300 jobs are created with retail outlets, while 1,124 jobs are generated in the local transportation sector, primarily with cabs, buses, and other forms of public or for hire transportation.¹ About 1,076 travel agents are supported by the purchases of tickets by local residents using BWI.

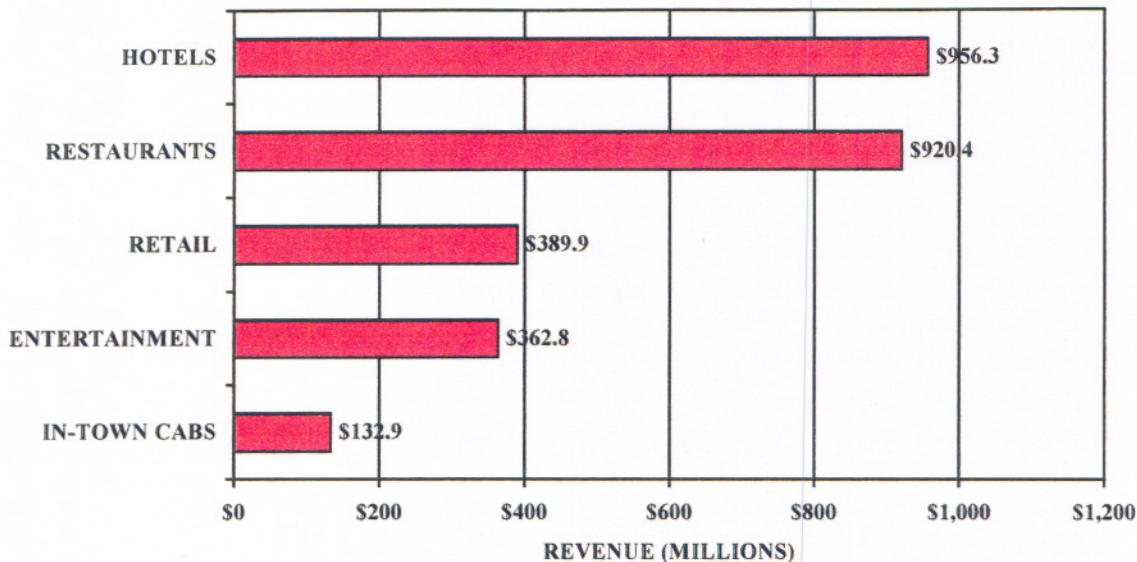
2. BUSINESS REVENUE IMPACT

The purchases made by visitors to the Baltimore area in 2000 generated \$2.8 billion of business revenue to hotels, restaurants, retail outlets, entertainment establishments and local transportation firms. The distribution of the business revenue by visitor sector industry is shown in Exhibit 9. As this exhibit demonstrates, local hotels received \$956.3 million due to visitors using the airport, while restaurants received \$920.4 million in sales as a result of visitors using BWI. Nearly

¹These local transportation jobs exclude the airport-generated jobs with rental cars, cabs and buses moving passengers to and from the airport.

\$389.9 million was spent on local retail purchases by visitors using BWI, while visitors spent about \$362.8 million on local recreational and entertainment activities.

Exhibit 9
Distribution of Visitor Industry Purchases



3. PERSONAL INCOME AND TAX IMPACTS

The 43,471 individuals directly employed in the Baltimore visitor industry as the result of expenditures by the 4.2 million visitors to the area received \$583.8 million in wages and salaries. A portion of this personal income is also used for regional purchases of goods and services, creating induced jobs. Applying the personal income multiplier described in Chapter III, the total income impact, including respending, is \$1.1 billion, due to visitors arriving via BWI.

As a result of the respending of the \$583.8 million of direct personal income due to visitors arriving via BWI, 17,375 induced jobs are generated within the Baltimore regional economy.

Finally, as a result of the visitors arriving via BWI, \$505.8 million of state and local taxes are created, including local hotel tax receipts.

V. RELATED JOBS AT BWI

In this chapter jobs related to, but not dependent upon, BWI are estimated. These related jobs should be viewed only as an indicator of the importance of BWI to the local business community. It is to be emphasized that the level of defensibility of the related jobs is lower than for the direct and induced jobs, primarily due to the fact that a sample of users and the results of other published studies are used rather than a 100 percent survey of all current, past and potential users of the Airport. Such a 100 percent survey would require resources not in the scope of the current study. Furthermore, since related jobs are not based on a 100 percent survey of all users, Martin Associates does not recommend that related jobs be considered when using the airport impact model to evaluate planning decisions. With these caveats in place, the remainder of the chapter provides an overview of the Airport related jobs.

Related jobs are with freight users of BWI. These shippers use BWI as well as other airports for air cargo shipments. Therefore, these shippers are not directly dependent upon BWI in the same sense as are the firms that supply direct services to the airlines and/or passengers. However, the use of BWI by these shippers is important in stimulating economic activity in the region.

To estimate related jobs, the results of a study of air freight shippers conducted for the Commonwealth of Virginia, Aviation Department, estimated that the average value of air shipments is about \$40 per pound.¹ Multiplying this value per pound estimate by the 241.2 million pounds of air freight (both domestic and international) enplaned at BWI in the year 2000, it is estimated that the total value of air cargo shipped via the airport is about \$9.7 billion. A recent survey of national air freight shippers by Martin Associates indicated that .00946 jobs are related to every \$1,000 of air freight value.² Using the jobs to \$1,000 of air cargo value, it is estimated that about 91,270 jobs are related to air freight shipments via BWI.

In conclusion, it is to be emphasized that these jobs are related to, not dependent upon, BWI. The level of employment with these users is determined by the demand for the firms' products, not the use of BWI.

1. *The Local and Regional Economic Impact of National and Dulles International Airports, prepared by Martin Associates for the Metropolitan Washington Airports Authority, 1992, 1994, 1996 and 1998.*

2. *Ibid.*

VI. COMPARISON WITH 1998 IMPACTS CREATED BY BWI

Martin Associates conducted the 1998 economic impact study for BWI using a similar methodology as in this current study. Therefore, direct comparisons can be made with the 1998 impact study. Between 1998 and the year 2000, total passenger activity at BWI increased from 15 million to 19.7 million passengers and air freight loaded at BWI grew from 220.6 million pounds to 241.2 million pounds. Air mail loaded at BWI actually declined from 57.2 million pounds to 48.6 million pounds. The growth in passenger activity and air freight activity at BWI resulted in an increased economic contribution of BWI to the local and regional economy. Table 10 shows the growth in airport generated economic impacts at BWI.

Table 10
Comparison of Airport Generated Economic Impacts

	2000 BWI Airport Generated	1998 BWI Airport Generated	Change
JOBS			
Direct Jobs	12,030	10,140	1,890
Induced Jobs	6,369	5,755	614
Indirect Jobs	<u>5,692</u>	<u>5,923</u>	<u>-231</u>
Total Jobs	24,091	21,818	2,273
Personal Income (Millions \$)			
Direct	\$358	\$337	\$21
Induced	\$303	\$285	\$18
Indirect	<u>\$138</u>	<u>\$102</u>	<u>\$36</u>
Total	\$799	\$724	\$75
Business Revenue (Millions \$)	\$3,781	\$2,744	\$1,037
Local Purchases (Millions \$)	\$236	\$217	\$20
State and Local Taxes (Millions\$)	\$200	\$181	\$19
Federal Aviation Taxes (Millions\$)	\$283	\$180	\$103

With respect to airport generated impacts, direct jobs grew by 1,890 jobs while induced jobs increased by 614 jobs. The largest growth in direct jobs was recorded for passenger airlines and airport concessions. Despite the fact that local purchases grew between 1998 and 2000, indirect jobs actually declined due to the change in the composition of local purchases – in the year 2000 relatively more local purchases were made for goods and services that are less labor intensive than was the case in 1998. Also, there were some productivity gains reported by the Bureau of Economic Analysis in certain supplying industries.

Personal wage and salary income grew by \$21 million, while the induced income and consumption impact grew by \$18 million. Indirect income grew by \$36 million, despite the reduction in indirect jobs, which reflects the higher paying indirect business services jobs created in 2000 compared to the larger share of retail and wholesale indirect jobs in 1998.

Business revenue grew by more than \$1 billion reflecting the growth in passengers and air freight loaded at BWI as well as an increase in average airline revenue per enplaned passenger. State and local taxes also grew reflecting the growth in direct, indirect and induced jobs as well as income.

Table 11 shows the growth in the visitor industry impacts.

Table 11
Change in BWI Visitor Industry Impacts
1998-2000

	2000 BWI Visitor Generated	1998 BWI Visitor Generated	Change
JOBS			
Direct Jobs	43,471	37,500	5,971
Induced Jobs	17,375	15,225	2,150
Total Jobs	60,846	52,725	8,121
 Personal Income (Millions \$)			
Direct	\$584	\$513	\$71
Induced	\$494	\$433	\$60
Total	\$1,077	\$946	\$132
 Business Revenue (Millions \$)	\$2,762	\$2,384	\$378
 State and Local Taxes (Millions \$)	\$506	\$438	\$67

Between 1998 and 2000, visitors arriving via BWI grew from 3.8 million to 4.2 million, which resulted in the growth in visitor industry impacts. Direct visitor industry jobs grew by nearly 6,000 jobs, while induced jobs grew by 2,150 jobs. The local purchases by visitors increased by \$378 million, and total personal income including the respending impact grew by \$132 million. Over this same period, the composition of the visitors using BWI also changed. In 1998, 74.5 percent of the domestic visitors were business travelers compared to 42.2 percent in the year 2000. In contrast to the growth in domestic pleasure travelers using BWI, the share of international passengers that are business travelers increased from 33.3 percent in 1998 to 64.3 percent in the year 2000.

As these figures indicate, BWI's economic contribution to the State of Maryland has grown over the last two years, and continued infrastructure investment in the airport will be required to support the airports growing contribution to the state's economy.

VII. ECONOMIC IMPACT OF THE 35 GENERAL AVIATION AND COMMUTER AIRPORTS

The State of Maryland's Aviation System consists of 35 general aviation and commuter airports that serve the immediate regions 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 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 as well as military operations at Martin State Airport.

The activity at these 35 airports generates jobs and personal income to those employed by the airport tenants as well as to local visitor industry firms serving commuter passengers using Hagerstown, Salisbury and Cumberland 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 the flight schools. These firms providing the service and the individuals employed by these firms also pay state, local and federal taxes.

In the year 2000, the 35 general aviation and commuter airports in the Maryland Aviation System created the economic impacts summarized in Table 12.

Table 12
Economic Impacts of General Aviation and Commuter Activity
in the State of Maryland

	General Aviation Commuter Airports
JOBS	
Direct Jobs	3,163
Induced Jobs	1,554
Indirect Jobs	<u>2,808</u>
Total Jobs	7,525
Personal Income (\$1,000)	
Direct	\$103,633
Induced	\$87,668
Indirect	<u>\$75,378</u>
Total	\$266,679
Business Revenue (\$1,000)	\$697,126
Local Purchases (\$1,000)	\$103,588
State and Local Taxes (\$1,000)	\$64,012

In the year 2000, the 35 general aviation and commuter airports in the State of Maryland created the following impacts:

- 7,525 total jobs, of which:
 - ◆ 3,163 were directly created by airport activity at these airports
 - ◆ 1,554 jobs were supported in local economic sectors due to the purchases for goods and services by those 3,163 directly employed workers
 - ◆ 2,808 indirect jobs in the local economy were supported by \$103.6 million of local purchases by the airport tenants
- \$266.7 million dollars of personal wage and salary income was created in the State of Maryland by the activity at these 35 airports. This income consists of:
 - ◆ \$103.6 of direct wages and salaries earned by the 3,163 direct job holders
 - ◆ \$87.7 induced income and local consumption expenditures
 - ◆ \$75.4 million of indirect income which was earned by the 2,808 indirect job holders
- \$697.1 million of business revenue created from landing fees and servicing of the general aviation and commuter aircraft
- \$64 million of state and local taxes.

In the remainder of this chapter the economic impacts of each of the 35 airports is described. Exhibit 10 shows the location of each of the airports within the State of Maryland.

Baltimore Airpark (1W2)

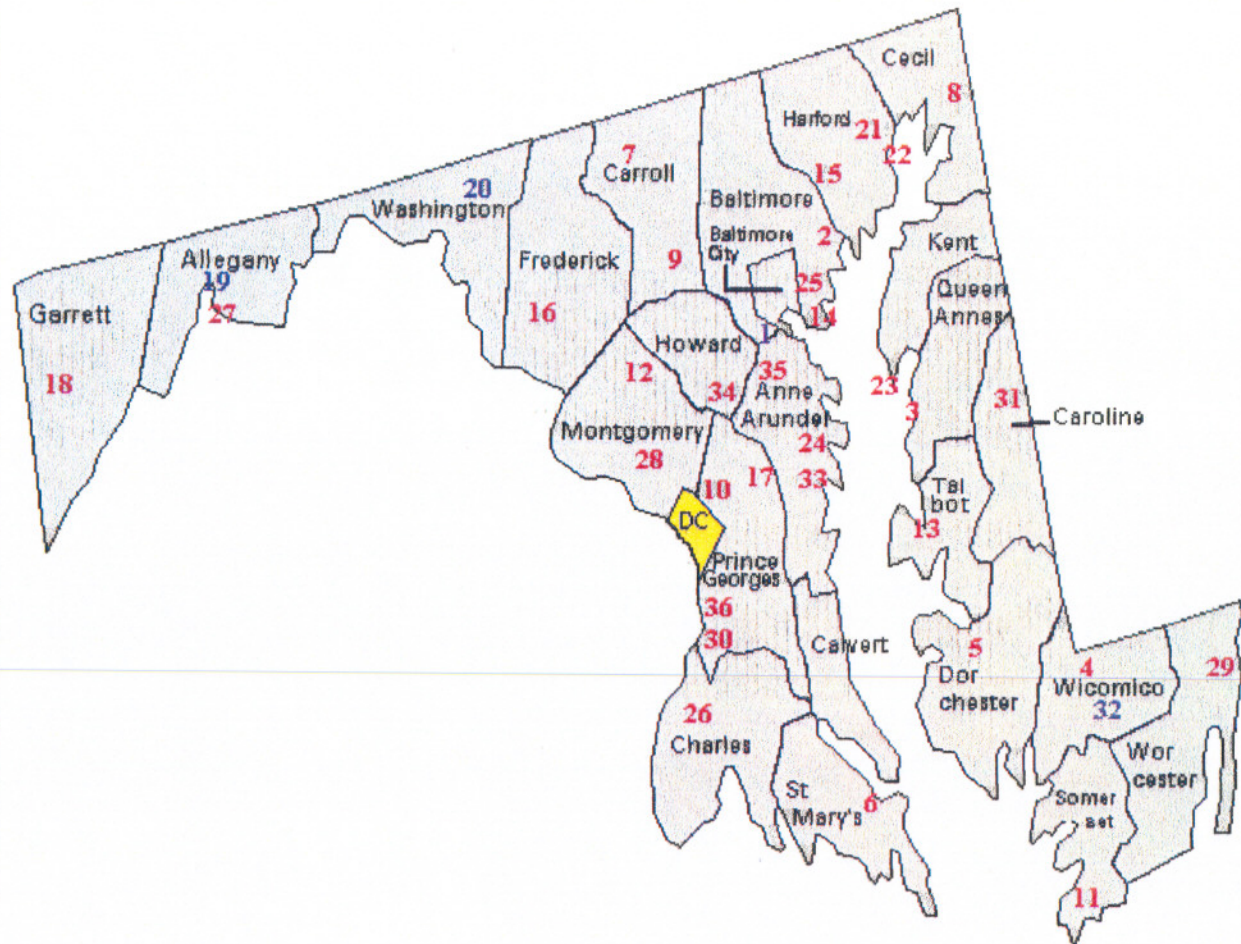
The Baltimore Airpark is a privately owned general aviation airport that is open for public use. The airport is located approximately 13 miles NE of Baltimore, MD. The airport has 1 asphalt runway available for use (2,200 x 49 ft.) and provides the following services:

- Fuel Sales (100LL)
- Major airframe service
- Major power plant service
- Flight instruction
- Aircraft rental and sales
- Aerial surveying
- T-hangars and paved & turf tiedowns

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

Exhibit 10
Location of Maryland
Airports

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



<u>Based Aircraft</u>	
Single-engine	21
Multi-engine	<u>1</u>
Totals	22

<u>Annual Aircraft Operations</u>	
Local GA	93%
Transient GA	7%
Total Operations	34,550

In addition to the airport manager, Martin Associates interviewed 3 tenants of the Baltimore Airpark, including Phoenix Flight, Banner Towing and an aerial photography company, to assess the economic impacts that are generated by the airport on the local economy. Baltimore Airpark generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	36
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$958
➤ Revenue – (\$1,000)	\$600
➤ Taxes – (\$1,000)	\$300
➤ Local Purchases – (\$1,000)	\$535

Bay Bridge Airport (W29)

The Bay Bridge Airport is a general aviation airport owned by Queen Anne's County and is open for public use. The airport is located on Kent Island approximately 1 mile W of Stevensville, MD. The airport has 1 asphalt runway available for use (2,910 x 60 ft.) and provides the following services:

- Fuel Sales (80oct and 100LL)
- Major airframe service
- Major power plant service
- Flight instruction
- Aircraft rental
- T-hangars and paved tiedowns

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

<u>Based Aircraft</u>	
Single-engine	64
Multi-engine	<u>10</u>
Totals	74

<u>Annual Aircraft Operations</u>	
Local GA	38%
Transient GA	62%
Total Operations	46,000

In addition to the airport manager, Martin Associates interviewed 3 tenants of the Bay Bridge Airport, including Proflight, Air Aerobatics 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 & Indirect)	13
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$500
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$112
➤ Local Purchases – (\$1,000)	

Bennett Airport (1N5)

The Bennett Airport is a small, privately owned general aviation airport that is open for public use. The airport is located on the Delmarva Peninsula about 4 miles NW of Salisbury, MD. The airport has 2 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
- T-hangars and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	<u>10</u>	Local GA	100%
Totals	10	Total Operations	2,000

In addition to the airport manager, Martin Associates interviewed 1 tenant of the Bennett Airport, Parachutes are Fun, to assess the economic impacts that are generated by the airport on the local economy. Bennett Airport generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	11
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$325
➤ Revenue – (\$1,000)	\$425
➤ Taxes – (\$1,000)	\$91
➤ Local Purchases – (\$1,000)	\$24

Cambridge/Dorchester County Airport (CGE)

The Cambridge/Dorchester County Airport is a publicly owned general aviation airport that is open for public use. The airport is located on the Delmarva Peninsula approximately 3 miles SE of Cambridge, MD. The airport has 1 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)
- Charter flights
- Aircraft refurbishing
- Aircraft maintenance
- 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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	35	Local GA	59%
Multi-engine	3	Transient GA	39%
Helicopter	<u>1</u>	Military	2%
Totals	39	Total Operations	18,210

In addition to the airport manager, Martin Associates interviewed 4 tenants of the Cambridge/Dorchester County Airport, including Aircraft Refinishers, Amp Air Corp., Ross Aviation 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 & Indirect)	62
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$1,886
➤ Revenue – (\$1,000)	\$3,621
➤ Taxes – (\$1,000)	\$385
➤ Local Purchases – (\$1,000)	\$377

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

The Capt. Walter Francis Duke Regional Airport is owned by St. Mary's County and is open for public use. The airport is located approximately 4 miles NE of Leonardtown, MD. The airport has 1 asphalt runway available for use (4,150 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

- Air freight
- Air ambulance
- 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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	76	Local GA	77%
Multi-engine	5	Transient GA	18%
Helicopter	<u>1</u>	Air Taxi	5%
Totals	82	Total Operations	52,618

In addition to the airport manager, Martin Associates interviewed 4 tenants of the Capt. Walter Francis Duke Regional Airport, including Aircraft Refinishing, Airpark Sales and Service, 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 & Indirect)	76
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$2,663
➤ Revenue – (\$1,000)	\$1,978
➤ Taxes – (\$1,000)	\$628
➤ Local Purchases – (\$1,000)	\$1,139

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

The Carroll County Regional Airport is owned by Carroll County and is open for public use. The airport is located approximately 3 miles N of Westminster, MD. The airport has 1 asphalt/grooved runway available for use (5,100 x 100 ft.) and provides the following services:

- Fuel Sales (100LL, 80oct and Jet A)
- Major airframe service
- Major power plant service
- Flight instruction
- Aircraft rental and sales
- Charter flights
- 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:

<u>Based Aircraft</u>	
Single-engine	105
Multi-engine	13
Helicopter	<u>2</u>
Totals	120

<u>Annual Aircraft Operations</u>	
Local GA	60%
Transient GA	40%
Total Operations	153,740

In addition to the airport manager, Martin Associates interviewed 3 tenants of the Carroll County Regional Airport, including HCA, Westair II 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 & Indirect)	145
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$4,057
➤ Revenue – (\$1,000)	\$1,441
➤ Taxes – (\$1,000)	\$1,207
➤ Local Purchases – (\$1,000)	\$5,351

Cecil County Airport (58M)

The Cecil County Airport is a small, privately owned general aviation airport that is open for public use. The airport is located in the northeastern corner of Maryland approximately 3 miles SW of Elkton, MD. The airport has 1 asphalt runway available for use (3,000 x 60 ft.) and provides the following services:

- Fuel Sales (80oct and 100LL)
- Minor airframe service
- Minor power plant service
- Flight instruction
- T-hangars and turf tiedowns

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

<u>Based Aircraft</u>	
Single-engine	31
Multi-engine	1
Gliders	1
Ultralights	<u>7</u>
Totals	40

<u>Annual Aircraft Operations</u>	
Local GA	55%
Transient GA	45%
Total Operations	8,798

In addition to the airport manager, Martin Associates interviewed 2 tenants of the Cecil County Airport, including Cecil Aero Services and Raintree Corporation, 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 & Indirect)	183
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$6,956
➤ Revenue – (\$1,000)	\$193
➤ Taxes – (\$1,000)	\$1,523
➤ Local Purchases – (\$1,000)	\$1,750

Clearview Airport (1W2)

The Clearview Airport is a privately owned general aviation airport that is open for public use. The airport is located in Carroll County and approximately 7 miles S of Westminster, MD. The airport has 1 asphalt runway available for use (1,840 x 30 ft.) and provides the following services:

- Fuel Sales (100LL and 80oct)
- Major airframe service
- Major power plant service
- Flight instruction
- Aircraft rental
- T-hangars and paved & turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	25	Local GA	10%
Multi-engine	<u>1</u>	Transient GA	90%
Totals	26	Total Operations	15,300

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

➤ Jobs (Direct, Induced & Indirect)	3
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$56
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$20
➤ Local Purchases – (\$1,000)	\$54

College Park Airport (CGS)

The College Park Airport is publicly owned by the Maryland National Capital Park and Planning Commission and is available for public use. The airport is located approximately 1 mile E of College Park, MD and the University of Maryland College Park campus. The airport has 1 asphalt runway available for use (2,610 x 60 ft.) and provides the following services:

- Fuel Sales (100LL and 80oct)
- Major airframe service
- Major power plant service
- Avionics service
- Aircraft maintenance
- Restaurant
- Paved and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	66	Local GA	75%
Multi-engine	<u>3</u>	Transient GA	24%
Totals	69	Military	.5%
		Air Taxi	.5%
		Total Operations	19,797

In addition to the airport manager, Martin Associates interviewed 2 tenants of the College Park Airport, including the 94th Aero Squadron Restaurant and College Park Aero Services, 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 & Indirect)	74
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$2,088
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$617
➤ Local Purchases – (\$1,000)	\$1,320

Crisfield-Somerset County Airport (W41)

The Crisfield-Somerset County Airport is a small, publicly owned general aviation airport that is open for public use. The airport is located on the Delmarva Peninsula approximately 3 miles NE of Crisfield, MD. The airport has 1 asphalt runway available for use (2,490 x 75 ft.) and 1 turf runway (3,280 x 115 ft.). The following services are available at this airport:

- Fuel Sales (100LL)
- Major airframe service
- Major power plant service
- Flight instruction
- Paved and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	<u>4</u>	Local GA	13%
Totals	4	Transient GA	79%
		Military	5%
		Air Taxi	3%
		Total Operations	2,094

Martin Associates interviewed the airport manager of the Crisfield-Somerset County Airport, 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 & Indirect)	3
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$78
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$24
➤ Local Purchases – (\$1,000)	

Davis Airport (1W2)

The Davis Airport is a small, privately owned general aviation airport that is open for public use. The airport is located in Central Maryland approximately 3 miles N of Laytonsville, MD. The airport has 1 turf/asphalt runway available for use (2,005 x 110 ft.) and provides the following services:

- Minor airframe service
- Minor power plant service
- Flight instruction
- Paved and turf tiedowns

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

<u>Based Aircraft</u>	
Single-engine	<u>27</u>
Totals	27

<u>Annual Aircraft Operations</u>	
Local GA	99%
Transient GA	1%
Total Operations	15,175

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

➤ Jobs (Direct, Induced & Indirect)	3
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$81
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$24
➤ Local Purchases – (\$1,000)	

Easton Airport/Newnam Field (ESN)

The Easton Airport is a publicly owned general aviation airport that is open for public use. The airport is located on the Delmarva Peninsula approximately 2 miles N of Easton, MD. The airport has 2 asphalt runways available for use (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
- T-hangars and paved tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	100	Local GA	19%
Multi-engine	14	Transient GA	64%
Jet	16	Military	5%
Helicopter	<u>5</u>	Air Taxi	12%
Totals	135	Total Operations	90,000

In addition to the airport manager, Martin Associates interviewed 20 tenants of the Easton Airport, including Air Repair, East Coast Flight Service, Easton Aviation, Easton Jet Service, Maryland Air, Hangar Cafe and Executive Air Center, to assess the economic impacts that are generated by the airport on the local economy. Easton Airport generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	1,203
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$32,580
➤ Revenue – (\$1,000)	\$12,483
➤ Taxes – (\$1,000)	\$10,002
➤ Local Purchases – (\$1,000)	\$36,184

Essex Skypark (W48)

The Essex Skypark is a small, publicly owned general aviation airport that is open for public use. The airport is located on the Back River approximately 3 miles SE of Baltimore, MD. The airport has 1 asphalt runway available for use (2,084 x 28 ft.) and 1 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
- Flight instruction
- Aircraft rental
- Aerial surveying
- T-hangars and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	34	Local GA	98%
Ultralights	<u>2</u>	Transient GA	2%
Totals	36	Total Operations	3,050

Martin Associates interviewed the airport manager of the Essex Skypark, to assess the economic impacts that are generated by the airport on the local economy. Essex Skypark generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	3
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$78
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$24
➤ Local Purchases – (\$1,000)	

Fallston Airport (W42)

The Fallston Airport is a privately owned general aviation airport that is open for public use. The airport is located approximately 1 mile S of Fallston, MD. The airport has 1 asphalt runway available for use (2,200 x 50 ft.) and provides the following services:

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

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	38	Local GA	42%
Totals	38	Transient GA	54%
		Military	4%
		Total Operations	2,702

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

➤ Jobs (Direct, Induced & Indirect)	7
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$332
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$55
➤ Local Purchases – (\$1,000)	

Frederick Municipal Airport (FDK)

The Frederick Municipal Airport is a publicly owned general aviation airport that is open for public use. The airport is located in Frederick County at the junction of I-70 and I-270. The airport has 2 asphalt runways available for use (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
- Banner towing
- T-hangars and paved tie-downs

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	182	Local GA	78%
Multi-engine	12	Transient GA	20%
Jet	9	Air Taxi	2%
Helicopters	12		
Gliders	26		
Ultralights	<u>2</u>		
Totals	243	Total Operations	131,800

In addition to the airport manager, Martin Associates interviewed 18 tenants of the Frederick Municipal Airport, including Frederick Aviation, 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 & Indirect)	1,028
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$44,298
➤ Revenue – (\$1,000)	\$70,906
➤ Taxes – (\$1,000)	\$8,547
➤ Local Purchases – (\$1,000)	\$10,608

Freeway Airport (W00)

The Freeway Airport is a privately owned general aviation airport that is open for public use. The airport is located 2 miles NW of Mitchellville, MD and approximately 15 miles E of downtown Washington DC. The airport has 1 asphalt runway available for use (2,425 x 30 ft.) and provides the following services:

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

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	88	Local GA	91%
Multi-engine	3	Transient GA	6%
Ultralights	<u>1</u>	Military	2%
Totals	92	Air Taxi	1%
		Total Operations	61,456

Martin Associates interviewed the airport manager of the Freeway Airport, to assess the economic impacts that are generated by the airport on the local economy. Freeway Airport generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	44
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$1,115
➤ Revenue – (\$1,000)	\$1,050
➤ Taxes – (\$1,000)	\$364
➤ Local Purchases – (\$1,000)	\$250

Garrett County Airport (2G4)

The Garrett County Airport is publicly owned by Garrett County and is available for public use. The airport is located approximately 13 miles NE of Oakland, MD. The airport has 1 asphalt runway available for use (3,000 x 75 ft.) and provides the following services:

- Fuel Sales (100LL and 80oct)
- Flight instruction
- Aircraft rental
- Charter flights
- Banner towing
- T-hangars and paved tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	12	Local GA	53%
Multi-engine	2	Transient GA	42%
Jet	3	Military	3%
Helicopters	<u>1</u>	Air Taxi	2%
Totals	18	Total Operations	17,800

Martin Associates interviewed the airport manager of the Garrett County Airport, 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 & Indirect)	3
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$78
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$24
➤ Local Purchases – (\$1,000)	

Greater Cumberland Regional Airport (CBE)

Although the Greater Cumberland Regional Airport is located 3 miles S of Cumberland, MD in West Virginia, the airport is part of the Maryland's aviation system and is owned by the Potomac Highlands Airport Authority. The airport offers commuter passenger service to Pittsburgh with 2 daily flights representing approximately 450 enplaning passengers per month, however, the US Airways station is in the process of being closed in February 2001. The Greater Cumberland Regional Airport has 2 asphalt runways available for use, of which one is grooved, (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
- Charter flights
- Commuter passenger service
- Air ambulance/Medivac
- Glider operations
- Banner towing
- Airport restaurant
- 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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	37	Local GA	51%
Multi-engine	4	Transient GA	11%
Jet	3	Military	1%
Helicopters	1	Commercial	37%
Gliders	<u>5</u>		
Totals	50	Total Operations	22,757

In addition to the airport manager, Martin Associates interviewed 4 tenants of the Greater Cumberland Regional Airport, including US Airways Express, Maryland State Trooper, Cumberland Air and Cumberland Air Cafe, 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 & Indirect)	103
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$3,660
➤ Revenue – (\$1,000)	\$1,756
➤ Taxes – (\$1,000)	\$512
➤ Local Purchases – (\$1,000)	\$1

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

The Hagerstown Regional Airport is located 4 miles N of Hagerstown, MD and offers daily commuter passenger service to Pittsburgh with 6 daily flights Monday through Friday and 5 daily flights on Saturdays and Sundays. Passenger activity represents approximately 2,000 enplaning passengers per month. The Hagerstown Regional Airport has 2 asphalt runways available for use, of which one is grooved, (5,461 x 150 ft. and 3,494 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
- Avionics service
- Charter flights
- Air cargo
- Aircraft maintenance
- Automobile rentals
- Airport restaurant
- Corporate flight departments
- Tower
- T-hangars and paved tie-downs

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	150	Local GA	32%
Multi-engine	44	Transient GA	53%
Jet	2	Military	3%
Helicopters	1	Air Taxi	5%
Ultralights	3	Commuters	5%
Military	4	Air Carriers	2%
Totals	204	Total Operations	62,807

In addition to the airport manager, Martin Associates interviewed 29 tenants of the Hagerstown Regional Airport, including US Airways Express, JRA Executive Air, Hagerstown Aircraft Services, Earthdata and Aviation Resources, 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 & Indirect)	562
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$18,280
➤ Revenue – (\$1,000)	\$26,427
➤ Taxes – (\$1,000)	\$4,663
➤ Local Purchases – (\$1,000)	\$200

Harford County Airport (0W3)

The Harford County Airport is a privately owned general aviation airport that is open for public use. The airport is located approximately 3 miles E of Churchville, MD in Harford County. The airport offers 1 asphalt runway (2,140 x 40 ft.) and 1 asphalt/turf runway (1,600 x 85 ft.). The following services are provided at this airport:

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

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

<u>Based Aircraft</u>	
Single-engine	53
Helicopters	1
Gliders	6
Ultralights	<u>3</u>
Totals	63

<u>Annual Aircraft Operations</u>	
Local GA	96%
Transient GA	4%
Total Operations	35,529

In addition to the airport manager, Martin Associates interviewed 2 tenants of the Harford County Airport, including Harford Air 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 & Indirect)	12
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$1,427
➤ Revenue – (\$1,000)	\$535
➤ Taxes – (\$1,000)	\$157
➤ Local Purchases – (\$1,000)	\$14

Havre de Grace Seaplane Base (M06)

The Havre de Grace Seaplane Base is a small, privately owned general aviation airport that is open for public use. The primary use of the airport is with ultralights. The airport is located approximately 1 mile E of Havre de Grace, MD. The airport has 2 water runways available for use (8,000 x 200 ft.) and provides the following services:

- Minor airframe service
- Flight instruction
- Aircraft sales

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

<u>Based Aircraft</u>	
Single-engine	2
Ultralights	<u>2</u>
Totals	4

<u>Annual Aircraft Operations</u>	
Local GA	92%
Transient GA	8%
Total Operations	873

In addition to the airport manager, Martin Associates interviewed 1 tenant of the Havre de Grace Seaplane Base, Ultrafun, 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 & Indirect)	6
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$157
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$49
➤ Local Purchases – (\$1,000)	

Kentmorr Airpark (3W3)

The Kentmorr Airpark is a small, privately owned general aviation airport that is open for public use. The airpark was established as a residential airpark and is owned and operated by the local homeowners association. The airpark is located on Kent Island, approximately 5 miles SW of Stevensville, MD. and provides convenient access to a marina, restaurant and golf course. The airpark has 1 turf runway available for use (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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	<u>14</u>	Local GA	70%
Totals	14	Transient GA	30%
		Total Operations	4,500

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

➤ Jobs (Direct, Induced & Indirect)	2
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$39
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$12
➤ Local Purchases – (\$1,000)	

Lee Airport (ANP)

The Lee Airport is a family-run general aviation airport that is open for public use. The airport is located approximately 5 miles SW of Annapolis, MD. The airport has 1 asphalt runway available for use (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
- T-hangars and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	120	Local GA	67%
Multi-engine	30	Transient GA	29%
Helicopters	3	Military	5%
Totals	153	Total Operations	64,000

In addition to the airport manager, Martin Associates interviewed 4 tenants of the Lee Airport, including Army/Navy Flying Club, 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 & Indirect)	22
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$599
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$185
➤ Local Purchases – (\$1,000)	\$532

Martin State Airport (MTN)

The Martin State Airport is a general aviation airport owned and operated by the Maryland Aviation Administration and is open for public use. The airport is located approximately 9 miles E of Baltimore, MD. The airport has 1 concrete runway available for use (6,996 x 180 ft.) and 1 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
- Control tower

- Corporate flight departments
- Community and T-hangars
- Paved and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	213	Local GA	38%
Multi-engine	23	Transient GA	55%
Jet	21	Military	7%
Helicopters	21		
Military	<u>38</u>		
Totals	316	Total Operations	125,865

Martin Associates interviewed 32 tenants of the Martin State Airport, including the Maryland Air National Guard, Northrup Grumman, Skytech, Lockheed Martin 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 & Indirect)	2,467
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$94,691
➤ Revenue – (\$1,000)	\$515,387
➤ Taxes – (\$1,000)	\$20,503
➤ Local Purchases – (\$1,000)	\$38,972

Maryland Airport (2W5)

The Maryland Airport is a small, privately owned general aviation airport that is open for public use. The airport is located approximately 4 miles E of Indian Head, MD. The airport has 1 asphalt runway (3,000 x 50 ft.) and 1 turf runway (1,860 x 100 ft.) and provides the following aviation related services:

- Fuel Sales (100LL)
- Major airframe service
- Major power plant service
- Flight instruction
- Aircraft sales
- Avionics services
- Charter flights
- Corporate flight departments
- T-hangars and paved tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	66	Local GA	55%
Multi-engine	<u>8</u>	Transient GA	36%
Totals	74	Military	7%
		Air Taxi	1%
		Total Operations	27,400

In addition to the airport manager, Martin Associates interviewed 11 tenants of the Maryland Airport, including Atlantic Cycles, Professional Flight Services and Washington Hospital Medivac, to assess the economic impacts that are generated by the airport on the local economy. Maryland Airport generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	62
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$1,983
➤ Revenue – (\$1,000)	\$4,750
➤ Taxes – (\$1,000)	\$513
➤ Local Purchases – (\$1,000)	\$1,078

Mexico Farms Airport (1W3)

The Mexico Farms Airport is a small, privately owned general aviation airport that is open for public use. The airport is located in Western Maryland approximately 3 miles S of Cumberland, MD. The airport has 2 turf runways available for use (2,120 x 190 ft. and 2,100 x 195 ft.) but does not provide any services.

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	19	Local GA	82%
Multi-engine	<u>4</u>	Transient GA	18%
Totals	23	Total Operations	1,261

Martin Associates interviewed the airport manager of the Mexico Farms Airport, 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 & Indirect)	1
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$39
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$12
➤ Local Purchases – (\$1,000)	

Montgomery County Airpark (GAI)

The Montgomery County Airpark is a publicly owned general aviation airport that is open for public use. The airport is located 3 miles NE of Gaithersburg, MD. The airport has 1 asphalt runway available for use (4,195 x 75 ft.) and provides the following services:

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

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	210	Local GA	57%
Multi-engine	35	Transient GA	35%
Jet	<u>3</u>	Air Taxi	8%
Totals	248	Total Operations	140,595

In addition to the airport manager, Martin Associates interviewed 16 tenants of the Montgomery County Airpark, 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 & Indirect)	202
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$7,665
➤ Revenue – (\$1,000)	\$11,533
➤ Taxes – (\$1,000)	\$1,675
➤ Local Purchases – (\$1,000)	\$2,507

Ocean City Municipal Airport (OXB)

The Ocean City Municipal Airport is owned by the Town of Ocean City and is open for public use. The airport is located approximately 2 miles SW of Ocean City, MD. The airport has 2 asphalt/concrete runways available for use (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
- Skydiving
- Automobile rentals
- Sightseeing
- 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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	25	Local GA	20%
Multi-engine	3	Transient GA	78%
Ultralights	<u>1</u>	Military	2%
Totals	29	Total Operations	37,000

In addition to the airport manager, Martin Associates interviewed 9 tenants of the Ocean City Municipal Airport, including Ocean City Aircraft, Cloud Dancer, Atlantic Air 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 & Indirect)	30
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$963
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$252
➤ Local Purchases – (\$1,000)	\$239

Potomac Airfield (VKX)

The Potomac Airfield is a publicly owned general aviation airport that is open for public use. The airport is located in close proximity to Washington DC in Prince George's County. The airport has 1 asphalt runway available for use (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
- Aircraft maintenance
- Automobile rentals
- T-hangars and turf tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	97	Local GA	98%
Multi-engine	<u>15</u>	Transient GA	2%
Totals	112	Total Operations	52,925

In addition to the airport manager, Martin Associates interviewed 7 tenants of the Potomac Airfield, including Buckley Aviation, Aviation Adventures 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 & Indirect)	67
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$2,198
➤ Revenue – (\$1,000)	\$2,246
➤ Taxes – (\$1,000)	\$560
➤ Local Purchases – (\$1,000)	\$941

Ridgely Airpark (1N0)

The Ridgely Airpark is a small, privately owned general aviation airport that is open for public use. The airport, formerly known as Ridgely-Pelican is located on the Delmarva Peninsula about 2 miles NE of Ridgely, MD and 35 E of the Bay Bridge. The airport has 1 asphalt runway available for use (3,200 x 50 ft.) and provides the following aviation-related services:

- Fuel Sales (100LL and Jet A)
- Agricultural operations (aerial spraying)
- Glider operations
- Flight instruction
- Aircraft rental
- Banner towing
- T-hangars and paved tiedowns

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	15	Local GA	75%
Helicopters	6	Transient GA	24%
Gliders	<u>15</u>	Military	.5%
Totals	36	Air Taxi	.5%
		Total Operations	31,113

In addition to the airport manager, Martin Associates interviewed 2 tenants of the Ridgely

Airpark, including Soaring Express and Glider Club, to assess the economic impacts that are generated by the airport on the local economy. Ridgely Airpark generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	6
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$177
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$51
➤ Local Purchases – (\$1,000)	\$70

Salisbury-Ocean City: Wicomico Regional Airport (SBY)

The Salisbury-Ocean City: Wicomico Regional Airport is located 4 miles SE of Salisbury, MD and offers daily commuter passenger service to Washington National, Philadelphia International and Baltimore-Washington International Airports with 13 daily flights. Passenger activity represents approximately 6,400 enplaning passengers per month. The Salisbury-Ocean City: Wicomico Regional Airport has 1 asphalt runway available for use (5,000 x 100 ft.) and 1 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
- Control tower
- Charter flights
- Corporate flight departments
- Air freight
- Automobile rentals
- Airport restaurant
- T-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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	78	Local GA	11%
Multi-engine	71	Transient GA	79%
Jet	3	Military	2%
Helicopters	1	Air Taxi	2%
Ultralights	3	Commuters	2%
Totals	156	Air Carriers	2%
		Total Operations	98,490

In addition to the airport manager, Martin Associates interviewed 16 tenants of the Salisbury-Ocean City: Wicomico Regional Airport, including Piedmont Airlines, Federal Express, Maryland State Police, Bayland Aviation and RVA, 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 & Indirect)	1,019
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$33,071
➤ Revenue – (\$1,000)	\$39,413
➤ Taxes – (\$1,000)	\$10,216
➤ Local Purchases – (\$1,000)	\$1,022

South River Seaplane Base

The South River Seaplane Base is a small general aviation airport that is open for public use and used primarily for ultralights. The airport is located in Edgewater, MD. The airport does not provide any aviation-related services.

Aviation activity at the South River Seaplane Base represents the following operational statistics regarding based aircraft and number of operations:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	<u>2</u>		
Totals	2	Total Operations	200

Martin Associates interviewed the airport manager of the South River Seaplane Base, to assess the economic impacts that are generated by the airport on the local economy. South River Seaplane Base generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	2
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$39
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$12
➤ Local Purchases – (\$1,000)	

Suburban Airpark (W18)

The Suburban Airpark is a publicly owned general aviation airport that is open for public use. The airport is located approximately 2 miles SE of Laurel, MD. The airport has 1 asphalt runway available for use (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
- T-hangars

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	<u>65</u>	Local GA	98%
Totals	65	Transient GA	2%
		Total Operations	20,400

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

➤ Jobs (Direct, Induced & Indirect)	8
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$264
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$65
➤ Local Purchases – (\$1,000)	\$57

Tipton Airport (FME)

The Tipton Airport is owned and operated by the Tipton Airport Authority and is open for public use. The airport is located about 1 mile SW of Fort Meade (Odenton), MD. The airport has 1 asphalt runway available for use (3,000 x 75 ft.) and provides the following services:

- Fuel Sales (100LL)

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

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	19	Local GA	20%
Helicopters	<u>3</u>	Transient GA	80%
Totals	22	Total Operations	15,000

Martin Associates interviewed the airport manager of the Tipton Airport, to assess the economic impacts that are generated by the airport on the local economy. Tipton Airport generated the following impacts:

➤ Jobs (Direct, Induced & Indirect)	8
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$228
➤ Revenue – (\$1,000)	
➤ Taxes – (\$1,000)	\$63
➤ Local Purchases – (\$1,000)	\$91

Washington Executive/Hyde Field (W32)

The Washington Executive/Hyde Field is a privately owned general aviation airport that is open for public use. The airport is located approximately 2 miles SW of Clinton, MD. The airport has 1 asphalt runway available for use (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
- 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:

<u>Based Aircraft</u>		<u>Annual Aircraft Operations</u>	
Single-engine	107	Local GA	91%
Multi-engine	6	Transient GA	5%
Helicopters	2	Military	2%
Ultralights	<u>1</u>	Air Taxi	2%
Totals	116	Total Operations	38,000

In addition to the airport manager, Martin Associates interviewed 10 tenants of the Washington Executive/Hyde Field, including Fetter Aviation, Prince George's County Police 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 & Indirect)	68
➤ Personal Income (Direct, Induced & Indirect) – (\$1,000)	\$3,070
➤ Revenue – (\$1,000)	\$2,382
➤ Taxes – (\$1,000)	\$565
➤ Local Purchases – (\$1,000)	\$272