

ST. MARY'S COUNTY
CAPTAIN WALTER FRANCIS DUKE REGIONAL AIRPORT

ECONOMIC IMPACT STUDY

APRIL 2005



DELTA
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ECONOMIC IMPACT ASSESSMENT

Captain Walter Francis Duke Regional Airport

THE PURPOSE OF THIS REPORT IS to document the economic impact and contribution of Captain Walter Francis Duke Regional Airport - to the local economy. In addition, the value of undeveloped property on the north side of the Airport will be considered in this evaluation. For purposes of this analysis, the Airport name will be shortened to St. Mary's County Airport.

In recent years, the value of airports has come under increasing scrutiny from government officials and the general public. It is important, therefore, that the public and its representatives understand the economic significance of local airports if support is to be generated for airport projects. In particular, it is important to identify the direct economic contribution to the community and to area businesses that the airport provides. The challenge for policy makers is to weigh the value of the airport against those resources necessary to operate the airport at its maximum benefit to the community.

There exists a need to educate the general public on the benefits of aviation development and the value of these benefits to the community. Environmental concerns and budget constraints may impede achieving airport development and associated economic benefit. General aviation airports support new jobs and industry, which bring a higher standard of living for the residents of a particular area. Unlike large airline service airports, benefits of general aviation airports are not as apparent and need to be identified and publicized.

This analysis demonstrates the economic effects of airport and aviation use within St. Mary's County by tracing the movement of expenditures through the various economic sectors until the money is exported incrementally from the County through purchases of outside goods and services. This analysis is helpful in identifying the following:

- Estimating economic outputs at airports from a given set of inputs or investments;
- Quantifying the "hidden" value associated with airport activity (induced economic impacts);
- Identifying the beneficiaries of public investment in aviation (tracing the movement of money through different economic sectors);
- Providing information for public education about the economic value of aviation;
- Providing information in support of decision making; and
- Providing information in support of funding allocations.

1. GOALS AND METHODS OF ECONOMIC ANALYSIS

The goal of this study is to communicate economic benefits to the airport Sponsor and local communities for consideration in subsequent implementation of appropriate airport development, operations, and programs. Objectives of this analysis were to quantify the following economic aspects of St. Mary's County Airport:

- **Direct Spending:** On-airport spending on employment, operations, and capital projects. Associated with *providers* of services at the airport.
- **Indirect Spending:** Off-airport spending by air travelers for rental cars, hotels, restaurants, etc. Associated with the *users* of airport services.
- **Induced Benefits:** Impacts created by the successive rounds of spending in the local economy until the original direct or indirect impact has been incrementally exported from the local area.
- **Jobs and Income:** Quantify the income generated by aviation and the number of jobs supported by the airport.
- **Total Output in Dollars:** The combined impacts of direct, indirect, and induced spending.
- **Taxes:** Tax revenue contribution of the aviation industry to local and State units of government in Maryland.
- **Importance of Aviation:** Descriptions and measures of the importance of aviation to the economy.
- **Value of the North Parcel:** The analysis will examine the potential value of this undeveloped property and suggest potential uses.

To accomplish these objectives, the study utilized the following simplified process and methodology (see **Appendix A**):

- Collect data on direct and indirect impacts
 - Describe background and economic setting
 - Collect secondary source materials;
 - Distribute surveys
- Apply regional multipliers to direct and indirect impact numbers;
- Summarize all impacts; and
- Describe non-monetary impacts of St. Mary's County Airport and local aviation.

2. BACKGROUND AND SETTING

St. Mary's County is located in Southern Maryland, on a peninsula formed by the confluence of the Potomac and Patuxent Rivers and the Chesapeake Bay. The County is 60 miles southeast of Washington D.C. and 90 miles south of Baltimore. St. Mary's County Airport is located in southern Maryland, 4 miles northeast of Leonardtown. The Patuxent River Naval Air Station is located 8 miles east of the St. Mary's County Airport.

St. Mary's County Airport serves general aviation users with aircraft ranging from small single engine planes to small business jets. There are roughly 100 aircraft based at the Airport, including 86 single engine, 8 multi-engine, 3 helicopters, 2 ultralights, and 1 glider aircraft. The Airport features one runway: Runway 11-29, which is 4,150 feet by 75 feet. Airport services offered include fuel (100 Low Lead and Jet-A), major airframe and powerplant, flight instruction, aircraft sales, and rental. Hangar space and tie-down space are available for rent. The Airport features other services such as air ambulance, air cargo, and air taxi and charter service.

2.1 Tourism

The St. Mary's County Airport provides air access for tourism as well as business. As a tourist destination, St. Mary's County has a wide array of attractions. A sampling of some of these attractions include:

- ***Outdoor Recreation:*** St. Mary's County has thousands of acres of parkland and hundreds of miles of shoreline for outdoor recreation. Fishing, boating, and golf are among the more popular attractions in the region. The rich landscape and abundant natural resources draw thousands of tourists each year.
- ***Historic St. Mary's City:*** Located on the grounds of the original colony, this 800-acre outdoor museum offers costumed interpreters along colorful trails. Interpretive exhibits amid fascinating archaeological sites are found throughout Maryland's colonial capital.
- ***Patuxent River Naval Air Museum:*** The events leading up to WWII led the Navy to purchase 6,400 acres of land in St. Mary's County in order to develop a flight test center consolidating test activities. Major advances in aircraft such as the Harrier, Tomcat, and Osprey were evaluated there. This museum is the nation's only museum dedicated to naval aviation research, development, testing, and evaluation. Exhibits include the "Iron Maiden," the rubber airplane, the unmanned "Pioneer," and 17 pieces of aircraft.
- ***Piney Point Lighthouse Park and Museum:*** Fourteen miles from the mouth of the Chesapeake Bay stands the Piney Point Lighthouse, circa 1836. It is the first permanent lighthouse constructed on the Potomac River and is the only one still in its original location accessible to the public in Southern Maryland.

- ***Tourism Events:*** There are numerous tourism events held each year in the area that attract a large number of visitors. While most visitors to the area drive, some of these visitors may choose to fly using general aviation and the local airport in the future. Significant tourism events include the Budds River Motorcycle Races, the Potomac Jazz & Seafood Festival, the Southern Maryland Farm Life Festival, St. Mary's County Fair, the opening of a new Civil War Trail, and many others. All of these events focus on the positive aspects of the area and serve as a draw to visitors from all across the nation.

These and many other local tourist attractions in St. Mary's County all generate significant economic impacts to the region and create a demand for all modes of transportation.

2.2 Local Economy

The level of economic activity and the demand for air transportation services are linked. As population and income grow, air travel demand tends to grow as well. The local economy in St. Mary's County is based primarily on three sectors: government (including military), professional & technical services, and retail trade. Health care and construction are fourth and fifth out of twenty major sectors recorded. These five sectors employ almost 70 percent of the work force. The Patuxent River Naval Air Station is the economic engine driving much of the other industries. St. Mary's County led all other counties in Maryland in its percentage of high technology jobs (19.4%), followed by Montgomery County (14.8%), Howard County (13.2%), and Anne Arundel County (11.1%).

St. Mary's County population has grown from 47,860 in 1970 to 87,570, three decades later. In fact, population growth in St. Mary's County has outpaced the statewide population growth by more than a 2-to-1 margin over the three decade period (37 percent for the State versus 83 percent for St. Mary's County). Local employment growth has shown similar growth patterns. In this regard, St. Mary's County employment has grown by 165 percent over the past 30 years. The State of Maryland employment has grown at roughly half that pace (84 percent) over the same period.

A Virginia firm has purchased 400 acres south of the Airport in Wildewood for the planned development of up to 2,150 new homes. The developer has planned the construction of 200 new homes per year in this development area. This and other residential construction indicates a booming growth pattern for the future.

2.3 Local Industry

The St. Mary's Industrial Park is located adjacent to St. Mary's County Airport on the north side. On the south side of the Airport is Wildewood Technology Park and a retail shopping center. The Wildewood Technology Park consists of eight buildings and 263,000 square feet. There are two other significant business parks located in the area: Exploration Park and Expedition Park. These two business parks are located directly adjacent to the main entrance of

the Naval Air Station. They incorporate an additional 274,000 square feet of office space. The primary economic engine fueling the expansion of local businesses is the Patuxent River Naval Air Station. In responding to the need for additional business park space, the State of Maryland has approved the spending of \$2.5 million in funding for the Patuxent Business Park, located across the Patuxent River in neighboring Calvert County. This 92-acre business park will feature 650,000 square feet of Class A office and flex space. It is located near the Patuxent River Naval Air Station and the Lusby Town Center.

The Patuxent River Naval Air Station is the County's largest employer supporting roughly 28,000 jobs and providing a \$2.8 billion annual economic impact. The Naval Air Station serves as the Navy's principal research, development, test and evaluation, engineering and fleet support center for air platforms. The Navy has relocated thousands of jobs to the Patuxent River Naval Air Station over the past 10 years as a result of base realignment and closure legislation in Congress. The Federal Government has spent in excess of \$239 million in building new, or renovating existing facilities. With the consolidated workforce and expanded facilities, the Air Station complex has bolstered St. Mary's economic fortune. Spending has skyrocketed, major retailers have located in the area, and the burgeoning corporate presence has resulted in massive residential development.

3. SURVEY OF AIRPORT TENANTS

A survey of airport tenants was undertaken to estimate on-Airport employment, spending, and usage patterns at St. Mary's County Airport. Highlights from the surveys include the following:

- Average spending on single engine propeller based aircraft totaled \$5,580 in 2003. This means that every new aircraft may add a similar amount to the economy.
- Businesses on the Airport employ 18 full-time and 18 part-time personnel.
- Direct, on-Airport spending totals almost \$1.2 million per year. This includes capital development spending and on-Airport expenditures for operations and employment.
- Roughly 800 air visitors use the St. Mary's County Airport to access events in the area.

Companies/organizations located at the airport include:

- Piedmont Flight Center: The Airport's current Fixed Based Operator (FBO). Services include fueling, aircraft maintenance, and aircraft storage.
- Maryland State Police Medevac: Conducts life-saving aerial medical evacuation operations in Southern Maryland.
- SmartRide (BWI Shuttle Service): Provides outlet for van service to BWI Airport.
- AirTech: Provides air charter, maintenance, and contract services.

The importance of the Airport to area commerce is underscored by its business clientele. Prominent corporate and institutional organization users of St. Mary's County Airport include A.T. Massey Coal Company, 30 Minute Photo, Atlantic Aeromarine, AVCO Express, Belk Simpson Company, Bell Aviation, Boeing Company, Cessna Finance Corp., Cirrus Design Corp., Coleman Microwave Company, Comair Leasing, Department of the Navy, Fleet National Bank, Jet East Transportation, MD Aviation Admin., Piedmont Aviation Services, Penn State University, Publix Supermarkets, Washington Hospital Center, Surdex Corp., and many others.

4. APPLICATION OF REGIONAL MULTIPLIERS

Induced economic impacts are the *multiplied effects* of the direct and indirect impacts. Induced impacts are created by the successive rounds of spending in the local economy until the original direct or indirect impact has been incrementally exported from the local area. Thus, the economic impacts of aviation can be felt in parts of St. Mary's County's economy that are far removed from aviation. Regions that are more economically self-sufficient have higher respending "multipliers" than do regions that are more dependent on regional imports since less of the money is siphoned out of the community for goods and services.

For this study, IMPLAN software was selected as the best input-output model for developing respending multipliers. IMPLAN, developed originally by the U.S. Forest Service, is a comprehensive impact system that is built on the framework of input-output and social accounting methodology. The database is maintained at the county level, and includes the latest business censuses (1997) supplemented by County Business Patterns and other data derived from the Bureau of Economic Analysis. The input-output and social accounting models are derived from national data with adjustments made to reflect regional specialization, size and industrial composition. The procedures used to accomplish this are well-known and accepted in the literature on nonsurvey techniques. Since IMPLAN provides a much more comprehensive system (i.e., the complete input-output table or social accounts, in contrast to RIMS II and EIFS that only provide aggregate multipliers), it is possible to trace impacts of change in one sector on other sectors in a more detailed fashion.

Table 1 presents a summary of St. Mary's County Airport's direct, indirect, and induced economic impacts. The economic impact methodology first identified the direct spending and employment at St. Mary's County Airport (called direct impacts) and included the direct spending at off-airport sites such as hotels and restaurants (called indirect impacts in this study). Armed with this information, regional respending multipliers derived from IMPLAN software were applied to the data to determine the multiplied impacts of direct and indirect spending (called induced impacts). Appendix A presents a detailed summary of the economic impact respending process, by economic sector.

Table 1
Direct, Indirect, and Induced Economic Impacts
Captain Walter Francis Duke Regional Airport

ITEM	AMOUNT
Direct Impacts	
Airport-related Income*	\$594,000
On-Airport Expenditures (Total including capital costs)	\$1,197,600
Estimated State/Local Taxes	\$100,500
On-Airport Employment (Total)	19
Indirect Impacts	
Indirect Expenditures	\$228,400
Number of Jobs Supported	3
Induced Impacts	
Induced Direct and Indirect	\$576,800
Total Induced Employment Impacts	8
Grand Total Dollar Impacts	\$2,002,700
Grand Total Income Impacts*	\$810,100
Grand Total Employment Impacts	30

* Includes indirect incomes from visitor spending and capital development. This is a subset of the total impacts and is already included in the output number.

5. STATE AND LOCAL TAX IMPACTS

When discussing economic impacts of aviation, many people are interested in the collective benefits to the local municipalities and the State of Maryland. One measure of the collective local benefits involves the level of taxes paid to these local governmental units. In Maryland, there are a variety of taxes paid by airports and aviation users:

- Airport property taxes on privately owned hangars
- Sales tax
- Payroll taxes
- Aviation fuel tax

A number of these tax impacts were estimated by the IMPLAN model for expenditures at the State and local level. Estimated state and local tax impacts from spending at St. Mary's County Airport totaled \$100,500 in 2003. This tax revenue benefits all citizens of the area, not just those in aviation.

6. AIRPORT NORTH PARCEL

The North Parcel has been defined in previous studies as the 76.6-acre County-owned tract to the north and adjoining the Airport, see **Exhibit 1**. The property is currently wooded and has several wetland areas including a stream that traverses the land. If the property is developed, prior studies have shown the need to develop stormwater detention basins with a collective surface area of four to six acres. The North Parcel was studied in the early 1990s and recommendations at that time included the following:

- Use the property as an Aviation-related Technology Park
 - Minimum lot dimensions would be 200' by 200'.
 - Minimum frontage dimensions would be 150'.
 - Minimum front, side, and rear yard requirements of 75', 35', and 50', respectively.
 - Maximum Floor Area Ratios (FAR) of 0.40, which is the maximum allowable total area of all building floors in relation to the gross area of the lot.
 - Minimum Landscape Ratio (LSR) of 0.20.

- Target “upscale” technology clients since zoning language will permit many non-technology uses in the property. Both I-1 (General Industrial Zoning District) zoning and PUD-IP (Planned Unit Development - Industrial Park) zoning include such uses as food processing facilities, machine shops, manufacturing plants with storage yards, petroleum storage, recycling centers, and salvage yards (many of which are found in the existing St. Mary’s Industrial Park). By targeting upscale clients, a clean, high-technology oriented park with a campus-like environment could be developed.

- The property would be divided into six first-tier lots with direct taxiway access to the Airfield. These lots would average 2.75 acres, with one lot larger than the norm to accommodate an Airport Conference Center. In addition, there would be six second-tier lots accessible via primary access roads and cul-de-sac streets, or from Airport View Drive.

These recommendations remain valid today and should continue to be the foundation for development of the parcel. However, several things have occurred in other locations in the County since the plan was offered. First, many of the target high-technology industries have located in the area at three competing parks: Exploration Park, Expedition Park, and Wildewood Technology Park. The relocation of high-tech military testing and other such functions to Patuxent River Naval Air Station as a result of the BRAC closures of other military facilities has brought an influx of military contractors and personnel to the area. These businesses have been accommodated in ready-to-lease facilities located at the business parks. From a business perspective, it is sometimes easier to respond to a proposal by moving personnel to a leased office space than to buy and construct office or plant space. Many of these decisions are governed by timelines that do not permit lengthy start-up periods.

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**NORTH PARCEL
CAPTAIN WALTER FRANCIS DUKE REGIONAL AIRPORT**

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The North Parcel is still wooded, still has wetland issues, and still needs various environmental permits to begin to be developed. This time and money consuming process does not fit many business models used by companies desiring a quick entrance to the local market.

In order to move the project forward, there are several options. Most of these options require effort on the part of the County to effect change. Options for developing the North Parcel include but are not limited to the following:

- ***Leased Lots:*** If the property is to be leased, most companies would expect a developer to build their required space for them. Many companies avoid the perceived potential problems of being the owner of a building on someone else's land. Thus, it is likely that this property would have to be developed by the County (IDA or other entity) in order to retain lease control and resulting revenues. Some counties have used the concept of an incubator or business apartment as a means of stimulating demand at an industrial park. One problem with this model is the lack of capital available to the County for these ventures. Also, some believe that government should not compete in the private sector. Finally, it should be noted that if the County owns the buildings, no property taxes can be collected.

Even though it may be possible to lease lots to businesses or industries for construction of facilities, this may not bring quick results. If the leased lot option is used, the lots to be leased need to be shovel-ready and fast-tracked for approval.

- ***Sold Lots:*** A second option is to sell lots either to a developer or to the end-user. If the land is sold for development, the value of the land and their buildings can be added to the local tax base. At that point, it is up to the developer to market the property or the end-user to simply construct facilities and occupy the property.

Thus, if this option is taken, the County must identify a list of potential industrial park developers willing to undertake such a project. If the property is listed for sale, then the County can screen potential buyers and market the high-technology firms that are desired.

Property values vary by location, but pre-existing industrial buildings with associated land average roughly \$45-\$55 per square foot for sale, depending upon the particular use. Undeveloped industrial land sells for between \$40,000 and \$60,000 per acre. For leased property, warehousing space costs between \$4.00 and \$6.00 per square foot, while commercial/office space leases for between \$12.00 and \$20.00 per square foot. These variations in pricing indicate that a number of options are available to the County for the development of the North Parcel. Sale of the property to a developer could bring in between \$3.0 and \$4.5 million, while other development options would be significantly more complicated.

Under any of the above scenarios, the lots adjacent to the airfield should be reserved for potential use by corporate aviation. Once the runway length is increased, the use of the Airport by business jet operators will also increase. At that point, the availability of a corporate location with airfield access will become valuable.

In summary, there are no magic bullets that will market the property and attract just the right mix of clean, high-technology industries. Instead, trial and error, direct marketing, and use of the Internet for marketing will be required. There are vacancies in the St. Mary's Industrial Park and there are vacancies in the Wildewood Technology Park. These vacancies involve existing buildings with sufficient capacity to compete with the development of the North Parcel in the short term. While leasing property may be attractive for the long-term cash flows that they create, the difficulty of leasing undeveloped property in southern Maryland is evidenced by the lack of movement on the North Parcel over the last 10 years. The most pragmatic option may be to attract a developer who already has the marketing capability and the contacts to promote the property to a national client base.

7. COMPETITIVE POSITION

For the St. Mary's County Airport, the service area for small general aviation aircraft is roughly based on a 30-minute driving distance, approximately 30 miles. For the corporate service area, a larger distance that includes the Washington metro area was applied. Thus, there are a number of smaller airports near the St. Mary's County Airport that are competitors for single and light twin engine aircraft. However, if the runway is to be extended to more than 5,000 feet, St. Mary's County Airport would then compete with Easton Airport for corporate aviation outside the Class B airspace in the Washington/Baltimore terminal area. **Exhibit 2** presents a graphic depiction of the Class B airspace around the Washington/Baltimore terminal area. Because the metro area is a generator of corporate aviation operations, a number of companies are looking for airports just outside the controlled airspace. This is to ensure travel flexibility and freedom should Air Traffic Control block access to general aviation from entering the airspace either for capacity or security reasons. Given this dual role, a total of eight public-use airports, three military-use facilities, and at least 14 private, restricted-use airfields were identified within St. Mary's County Airport's service area. The public-use airports located within St. Mary's County's service area are: Bay Bridge, Chesapeake Ranch, Easton Airport (Newnam Field), Maryland Airport, Piney Point, Potomac Airfield, and Washington Executive, as illustrated on **Exhibit 3**. Although Piney Point, Chesapeake Ranch, and Hyde Field are smaller privately owned airports, they remain public use and thus are accessible to any pilot. Their competition to St. Mary's County Airport is not for itinerant aircraft, but rather for local based aircraft.

Facilities

Table 2 provides a comparison of airport facilities at public use airports within the service area of the St. Mary's County Airport. Easton Airport is the the largest public-use airport within the service area. This airport has a primary runway length of 5,500 by 100 feet. St. Mary's County is ranked second in the service area for both size and based aircraft totals. All but



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www.deltaairport.com

AIRPORT SERVICE AREA CAPTAIN WALTER FRANCIS DUKE REGIONAL AIRPORT

DRAWN BY: DWS CHECKED BY: DWD SCALE: NONE DATE: JULY 2004

EXHIBIT
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two of the public-use airports in the service area have instrument approach procedures. The ILS at Easton provides the best low visibility guidance of any non-commercial airport in the service area. St. Mary's County Airport is well served by the VOR (Very high frequency Omni Range) and GPS (Global Positioning System) non-precision instrument approaches. Corporate aviation will likely desire precision approaches in the future.

Based Aircraft

There are a reported total of 575 aircraft based at the public use airports within the service area of St. Mary's County Airport. The vast majority of these (87%) are single engine aircraft. The 20 jet aircraft are almost all located at Easton Airport, which this airport also bases 33 percent of the multi engine aircraft. With a total of 100 aircraft on the field, St. Mary's County holds the second-highest number of based aircraft in the service area.

Aviation Services

Table 3 presents the availability of various aviation services at each of the area airports. Listed services at St. Mary's County include major airframe and powerplant repairs, flight instruction, and charter service. Other area airports, such as Maryland and Easton Airports cited comparable services. Smaller airports in the service area did not have extensive services available.

Cost Comparisons

Monthly tie-down spaces are available at all of the service area airports contacted. Prices range from \$60 to \$100 per month at facilities across the board. At \$40 for turf tie-down and \$60 for paved tie-down space, the rates at St. Mary's County are slightly below the median for all service area airports. Aircraft storage space in conventional hangars at St. Mary's County Airport costs \$0.35/square foot but no space is currently available. Conventional hangar space is currently only available at Potomac Airfield, at \$375 per month. Six airports in the service area have T-hangars on the field. As of June 2004, only two, Potomac Airfield and Washington Executive, have limited space available, at going rates of \$350-425, and \$250-350 per month, respectively. Monthly T-hangar rates at St. Mary's County are \$300-\$350.

It should be noted that additional 50,500 square feet of conventional hangar space has been approved for construction or is already under construction at St. Mary's County. At many airports, monthly rates depend on age and condition and vary widely between airports.

Aviation Fuel (100LL Avgas) is available at six of the service area airports. The highest per gallon prices are found at Easton Airport (\$3.09). The price per gallon at St. Mary's County (\$2.75) is comparable to the other general aviation airports in the service area. The lowest price is found at Potomac Airfield, at \$2.21 per gallon. However, this airport, as well as Washington Executive, has a restricted use designation. In general, this means that only those with specific or prior authority, and/or prepurchased gas cards may use the facility. Another airport, Maryland Airport, discounts their current \$3.05 per gallon gas price at \$.05 if buyers pay in cash. All gas prices are changing with frequency, however. Jet fuel is available at St. Mary's County and three other airports in the service area (Bay Bridge, Easton, and Maryland Airport). The lowest price (\$2.35) is found at Bay Bridge. The highest price is again at Easton, with the price at St. Mary's County (\$2.74) only \$0.15 per gallon less. No landing fees are charged at any of the airports.

In summary, St. Mary's County Airport is priced at the mid-range level for most items, as shown in **Table 4**. Thus, it will remain competitive until price changes impact other airports in the service area. In order to remain competitive, airport management should monitor prices periodically at competing airports in the service area. Adjustments in pricing may be required to maintain and/or increase market share.

Survey Response

The survey of Airport tenants asked respondents to list needed facilities and services that would increase their use of the Airport, thus improving the overall competitive position of the Airport. Respondents indicated the need for the following:

- ***Airport Restaurant:*** Many respondents indicated that a restaurant in the unused portions of the terminal building would attract local and visiting patrons.
- ***Fixed Base Operator:*** Although the Airport already has an FBO, some respondents indicated that a cost-effective maintenance operation with avionics repair capability was needed.
- ***Longer Runway:*** Some respondents indicated the need for a longer runway that would accommodate smaller business jet aircraft.
- ***Precision Instrument Approach:*** Some respondents indicated that a precision instrument approach such as an Instrument Landing System would increase their use of the facility.
- ***Hangar Space:*** Some aircraft owners indicated the need for more aircraft hangar space. (As of this report date, new hangar space is being developed – 12 T-hangars, 18 box hangars as well as 20,000 s.f. of conventional hangar space.)

Improvements in each of these areas would improve the competitive position of the airport by better serving its existing clientele. In addition, the lengthening of the runway would serve to attract a new, more lucrative clientele – corporate aviation.

8. **NON-MONETARY IMPACTS**

There are a number of non-monetary benefits of aviation that have not included in the previous analysis. Some of these benefits include:

- **Transportation Benefits:** Defined as the time saved and cost avoided by travelers who use airports rather than the next best alternative. St. Mary's County Airport provides access to the National Air Transportation System.
- **Stimulation of Business:** Airports have been shown in other studies to be an important factor in the attraction and siting of new businesses in a community. This is particularly true for businesses with over 100 employees.
- **Aeromedical Evacuation:** Airports often serve as bases for aeromedical evacuation teams or flight services. This life-saving function has intrinsic value that often cannot be adequately quantified.
- **Recreation:** Roughly 50 percent of commercial airline travel and 60 percent of general aviation travel is for recreational purposes. This includes the valuable tourist trade which brings economic activity to the study region.

All of the above factors point to a value of an airport that is not easily quantified. The impacts that were estimated within the body of this report - direct, indirect, and induced - are only one facet of the overall picture. St. Mary's County Airport is much more valuable than these numbers can estimate. It is part of a scarce resource that needs support, protection, and appreciation from all the citizens it benefits both directly and indirectly. Appendix B presents letters from the Southern Maryland Navy Alliance, Calvert County Commissioners, and Calvert County Economic Development Commission all supporting the Airport and the associated runway expansion project.

**Table 2
Facility Comparison
Captain Walter Francis Duke Regional Airport**

<i>Airport</i>	<i>Ownership</i>	<i>Acres</i>	<i>ARC</i>	<i>Number of Based Aircraft</i>					<i>Runway</i>		<i>Nav aids</i>	<i>Tower</i>
				<i>Jet</i>	<i>Multi</i>	<i>Single</i>	<i>Rotor/ Other</i>	<i>Total</i>	<i>First L x W</i>	<i>Second L x W</i>		
<i>Saint Mary's Mary's Airport</i>	<i>St. Public County</i>		<i>2W6</i>	<i>0</i>	<i>8</i>	<i>86</i>	<i>6</i>	<i>100</i>	<i>4,150 x 75 P</i>		<i>VOR or GPS</i>	<i>No</i>
Bay Bridge	Public		W29	0	10	64	0	74	2,903' x 60' P	-	VOR/DME	No
Chesapeake Ranch	Private		MD50	0	1	27	0	28	2,500' x 50' P	-	None	
Easton	Public		ESN	19	14	110	5	148	5,500' x 100' P	4,003' x 100' P	ILS	No
Maryland Airport	Public		2W5	1	4	64	1	70	3,000' x 50' P	-	RNAV (GPS)	No
Potomac Airfield	Private		VKX	0	3	88	0	91	2,665' x 40' P	-	VOR/DME	
Piney Point	Private		MD96	-	-	-	-	-	4,100' x 75' P	-	None	No
Washington Executive	Public		W32	0	2	60	2	64	3,000' x 60' P	-	STAR	No
TOTAL				20	42	499	14	575				

Source: Airport Master Record as Published May 2004 (www.airnav.com).

Ownership: (R) = Reliever

Runways: T = turf, P = paved.

Table 3
Service Comparison
Captain Walter Francis Duke Regional Airport

<i>Airport</i>	<i>Frame Repairs</i>	<i>Power Repairs</i>	<i>Flight Instruction</i>	<i>Charter Service</i>	<i>Avionics</i>	<i>Aircraft Sales</i>	<i>Aircraft Rentals</i>	<i>Other</i>
<i>Saint Mary's St. Mary's County Airport</i>	<i>MAJOR</i>	<i>MAJOR</i>	<i>YES</i>	<i>NO</i>	<i>NO</i>	<i>NO</i>	<i>NO</i>	
Bay Bridge	MAJOR	MAJOR	NO	NO	NO	NO	NO	
Chesapeake Ranch	N/A	N/A	NO	NO	NO	NO	NO	
Easton	MAJOR	MAJOR	NO	YES	NO	NO	NO	Restaurant, catering, etc.
Maryland Airport	MAJOR	MAJOR	NO	YES	YES	YES	NO	Rental cars
Potomac Airfield	MAJOR	MAJOR	NO	NO	NO	NO	NO	
Piney Point	MINOR	MINOR	NO	NO	NO	NO	NO	
Washington Executive	MAJOR	MAJOR	NO	NO	NO	NO	NO	

Source: Airport Master Record as Published May 2004 (www.airnav.com).

Table 4
Rates and Charges Comparison
Captain Walter Francis Duke Regional Airport

Airport	Tie-Down		Conventional Hangars		T-Hangars		Lowest Fuel Price (\$/gallon)			Landing Fee
	\$/month	Available	\$/month	Available	\$/ month	Available	80 ll	100 ll	Jet A	
St. Mary's County Airport	\$40 - \$60	Yes	\$250	Yes	\$300-\$350	Yes	N/A	\$2.75	\$2.74	No
Bay Bridge	\$80	No	N/A	N/A	\$275-\$305	No	N/A	\$3.00	\$2.35	No
Chesapeake Ranch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Easton	\$65	Yes	N/A	N/A	\$165-\$245	No	N/A	\$3.09	\$2.89	No
Maryland Airport	\$60	Yes	\$200	No	\$225-\$300	No	N/A	\$3.05*	\$2.46	No
Potomac Airfield	\$75-\$100	Yes	\$375	Yes	\$350-\$425	Yes	N/A	\$2.21RA	N/A	No
Piney Point	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Washington Executive	\$65	Yes	N/A	N/A	\$250-350	Yes	N/A	\$2.84RA	N/A	No

Source: R.A.Wiedemann & Assoc., Inc. telephone survey 6-3-04

N/A Not available on airport

* Discounts: Cash equals \$.05/gal for 100LL

RA Restricted Use Designation

Appendix A:

Study Methods and Sources

APPENDIX A - STUDY METHODS AND SOURCES

The most significant, work-intensive portion of the economic impact analysis was the data collection effort. Results of the inventory and data collection formed the basis for inputs to the economic impact model. There are numerous publications and “on-line” resources that include data that can be used for economic impact analysis. On-line resources included the County’s web site: www.co.saint-marys.md.us and other Maryland economy sites ([www.mdarchives.state.md.us /msa/mdmanual](http://www.mdarchives.state.md.us/msa/mdmanual)). Several other publications were referenced including: the Federal Aviation Administration’s **Measuring the Regional Economic Significance of Airports**, the Airline Owners and Pilots Association’s **What's Your Airport Worth?**, the Partnership For Improved Air Travel’s **The Economic Impact of Civil Aviation on the U.S. Economy**, and the University of Illinois Regional Economics Applications Laboratory’s economic base model of choice - **IMPLAN**, concerning induced economic impacts that were used in this report.

Statistics on personal income and wages by industry and county are kept by U.S. Department of Commerce through their **Regional Economic Information System**. Also, the U.S. Census Bureau’s 1997 Economic Census of Maryland was referenced for payroll-to-wage and sales-to-wage ratios by industry.

For this study, IMPLAN software was selected as the best input-output model for developing respending multipliers. IMPLAN, developed originally by the US Forest Service, is a comprehensive impact system that is built on the framework of input-output and social accounting methodology. The database is maintained at the county level, and includes the latest business censuses (1997) supplemented by County Business Patterns and other data derived from the Bureau of Economic Analysis. The input-output and social accounting models are derived from national data with adjustments made to reflect regional specialization, size and industrial composition. The procedures used to accomplish this are well-known and accepted in the literature on nonsurvey techniques. Since IMPLAN provides a much more comprehensive system (i.e., the complete input-output table or social accounts, in contrast to RIMS II and EIFS that only provide aggregate multipliers), it is possible to trace impacts of change in one sector on other sectors in a more detailed fashion.

St. Mary's Airport, MD

EMPLOYMENT

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
11 Ag, Forestry, Fish & Hunting (AGG)	0.0	0.0	0.0	0.0
21 Mining (AGG)	0.0	0.0	0.0	0.0
22 Utilities (AGG)	0.0	0.0	0.0	0.0
23 Construction (AGG)	1.8	0.1	0.0	1.9
31-33 Manufacturing (AGG)	0.0	0.1	0.0	0.2
42 Wholesale Trade (AGG)	0.0	0.1	0.1	0.1
48-49 Transportation & Warehousing (AGG)	8.4	0.6	0.2	9.2
44-45 Retail trade (AGG)	0.9	0.4	1.0	2.4
51 Information (AGG)	0.0	0.1	0.0	0.1
52 Finance & insurance (AGG)	0.0	0.1	0.1	0.2
53 Real estate & rental (AGG)	0.1	0.4	0.3	0.8
54 Professional- scientific & tech svcs (AGG)	0.9	0.7	0.1	1.7
55 Management of companies (AGG)	0.0	0.1	0.0	0.1
56 Administrative & waste services (AGG)	7.0	0.3	0.1	7.4
61 Educational svcs (AGG)	0.0	0.0	0.1	0.1
62 Health & social services (AGG)	0.0	0.0	1.0	1.0
71 Arts- entertainment & recreation (AGG)	0.5	0.1	0.2	0.8
72 Accomodation & food services (AGG)	2.2	0.1	0.7	3.1
81 Other services (AGG)	0.0	0.2	0.4	0.7
92 Government & non NAICs (AGG)	0.0	0.1	0.2	0.4
TOTAL	21.8	3.6	4.7	30.1

Multiplier 1.38

INCOME

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$310	\$452	\$762
21 Mining (AGG)	\$0	\$0	\$0	\$0
22 Utilities (AGG)	\$0	\$1,759	\$1,847	\$3,606
23 Construction (AGG)	\$49,419	\$2,711	\$999	\$53,129
31-33 Manufacturing (AGG)	\$1,497	\$3,374	\$1,091	\$5,962
42 Wholesale Trade (AGG)	\$0	\$1,424	\$1,382	\$2,806
48-49 Transportation & Warehousing (AGG)	\$203,446	\$18,574	\$5,400	\$227,420
44-45 Retail trade (AGG)	\$14,380	\$7,200	\$18,328	\$39,908
51 Information (AGG)	\$16	\$3,372	\$1,269	\$4,658
52 Finance & insurance (AGG)	\$0	\$2,908	\$3,756	\$6,665
53 Real estate & rental (AGG)	\$491	\$3,931	\$2,754	\$7,176
54 Professional- scientific & tech svcs (AGG)	\$50,870	\$33,694	\$5,219	\$89,782
55 Management of companies (AGG)	\$0	\$4,342	\$1,414	\$5,757
56 Administrative & waste services (AGG)	\$193,682	\$4,328	\$1,355	\$199,364

61 Educational svcs (AGG)	\$0	\$672	\$2,216	\$2,889
62 Health & social services (AGG)	\$0	\$1	\$27,955	\$27,956
71 Arts- entertainment & recreation (AGG)	\$13,056	\$680	\$2,218	\$15,954
72 Accomodation & food services (AGG)	\$66,005	\$2,425	\$8,832	\$77,263
81 Other services (AGG)	\$0	\$4,727	\$7,042	\$11,769
92 Government & non NAICs (AGG)	\$1,109	\$8,622	\$17,563	\$27,294
TOTAL	\$593,971	\$105,055	\$111,093	\$810,119

Multiplier 1.36

OUTPUT

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$1,172	\$1,429	\$2,601
21 Mining (AGG)	\$0	\$0	\$0	\$0
22 Utilities (AGG)	\$0	\$7,391	\$7,763	\$15,153
23 Construction (AGG)	\$157,626	\$7,123	\$2,786	\$167,535
31-33 Manufacturing (AGG)	\$4,782	\$18,571	\$6,069	\$29,422
42 Wholesale Trade (AGG)	\$0	\$3,909	\$3,796	\$7,706
48-49 Transportation & Warehousing (AGG)	\$451,950	\$38,735	\$11,733	\$502,419
44-45 Retail trade (AGG)	\$40,773	\$16,689	\$43,113	\$100,575
51 Information (AGG)	\$52	\$11,475	\$4,454	\$15,980
52 Finance & insurance (AGG)	\$0	\$8,595	\$13,522	\$22,117
53 Real estate & rental (AGG)	\$4,133	\$26,349	\$17,910	\$48,392
54 Professional- scientific & tech svcs (AGG)	\$68,294	\$56,118	\$9,068	\$133,479
55 Management of companies (AGG)	\$0	\$7,169	\$2,335	\$9,504
56 Administrative & waste services (AGG)	\$396,776	\$9,220	\$2,755	\$408,751
61 Educational svcs (AGG)	\$0	\$1,410	\$3,757	\$5,166
62 Health & social services (AGG)	\$0	\$2	\$59,996	\$59,998
71 Arts- entertainment & recreation (AGG)	\$34,256	\$1,440	\$5,161	\$40,857
72 Accomodation & food services (AGG)	\$159,887	\$6,262	\$24,540	\$190,688
81 Other services (AGG)	\$0	\$18,403	\$24,714	\$43,118
92 Government & non NAICs (AGG)	\$1,349	\$11,871	\$79,950	\$93,169
TOTAL	\$1,425,988	\$251,902	\$324,851	\$2,002,741

Multiplier 1.40

Total Tax Impact

	Empl. Comp.	Prop. Income	Household Exp.	Enterprises	Indir. Bus. Tax	Totals
Corporate Profits Tax				\$12,083		\$12,083
Indirect Bus Tax: Custom Duty					\$1,020	\$1,020
Indirect Bus Tax: Excise Taxes					\$3,284	\$3,284
Indirect Bus Tax: Fed NonTaxes					\$1,159	\$1,159
Personal Tax: Estate and Gift Tax						\$0
Personal Tax: Income Tax			\$97,799			\$97,799
Personal Tax: NonTaxes (Fines- Fees			\$824			\$824
Social Ins Tax- Employee Contribution	\$29,982	\$5,225				\$35,207
Social Ins Tax- Employer Contribution	\$31,048					\$31,048
Federal Government NonDefense Total	\$61,031	\$5,225	\$98,623	\$12,083	\$5,464	\$182,424
Corporate Profits Tax				\$1,643		\$1,643
Dividends				\$28		\$28
Indirect Bus Tax: Motor Vehicle Lic					\$347	\$347
Indirect Bus Tax: Other Taxes					\$4,996	\$4,996
Indirect Bus Tax: Property Tax					\$29,217	\$29,217
Indirect Bus Tax: S/L NonTaxes					\$3,530	\$3,530
Indirect Bus Tax: Sales Tax					\$21,216	\$21,216
Personal Tax: Estate and Gift Tax						\$0
Personal Tax: Income Tax			\$32,881			\$32,881
Personal Tax: Motor Vehicle License			\$602			\$602
Personal Tax: NonTaxes (Fines- Fees			\$5,183			\$5,183
Personal Tax: Other Tax (Fish/Hunt)			\$138			\$138
Personal Tax: Property Taxes			\$403			\$403
Social Ins Tax- Employee Contribution	\$70					\$70
Social Ins Tax- Employer Contribution	\$252					\$252
State/Local Govt NonEducation Total	\$322	\$0	\$39,207	\$1,671	\$59,306	\$100,505
Total	\$61,352	\$5,225	\$137,830	\$13,753	\$64,769	\$282,929

Appendix B: Letters of Endorsement

Following is the text of a letter sent by the Navy Alliance to the St. Mary's County Board of Commissioners, emphasizing the economic importance of corporate jet landing availability. This has been a long-term project of the Alliance.

Dear Commissioners:

Donna

We understand that the environmental assessment of the recommended improvements to the St. Mary's County Airport is underway with an expected 2005 completion. The Southern Maryland Navy Alliance recommends that the improvements contained in "Alternative 3" be fully funded and implemented as soon as the Federal Aviation Administration has accepted the assessment.

This Alternative includes the extension and strengthening of the airport runway. These improvements are needed to complete this essential part of our community's infrastructure. Department of Defense activities need to be supported by key regional transportation capabilities.

The improved Airport facility was a priority item on a list submitted by the Navy Alliance last year, and we cited it as an essential priority. We pledge to advocate for the implementation of the full recommendations contained in the approved Master Plan. Our technology-based community needs to be able to rely upon an airport facility fully capable of safely handling heavier, larger and faster aircraft to accommodate corporate business use. We agree with the environmental assessment consultant that the number of air operations will continue to increase, and needed improvements must be planned for now.

We look forward to partnering with St. Mary's County government as we plan for an improved St. Mary's County Airport.

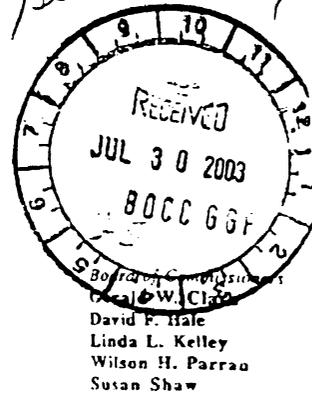
The Southern Maryland Navy Alliance



**CALVERT COUNTY
BOARD OF COUNTY COMMISSIONERS**

Courthouse, 175 Main Street
Prince Frederick, Maryland 20678
Phone: (410) 535-1600 • (301) 855-1243

July 29, 2003



Mr. Terry Page, Manager
Washington Airport District Office
Federal Aviation Administration
23723 Air Freight Lane, Suite 210
Dulles, VA 20166

Dear Mr. Page:

The St. Mary's County Board of County Commissioners recently submitted a grant application to conduct an Environmental Assessment for the Captain Walter F. Duke Regional Airport (AIP Project No. 3-24-0022-12). Completion of the Environmental Assessment is a critical component to ensure the balance of the project. Although the airport is not located in Calvert County, we believe the project can benefit the entire Southern Maryland region. The airport has the potential to enhance quality business development opportunities and expand the region's commercial tax base.

Our board believes in the merits of the Environmental Assessment to determine whether this aviation facility could expand and act as an economic asset for both of our growing jurisdictions. We look forward to the award and completion of the Environmental Assessment. Should you have any questions, please contact the County Administrator, James J. Allman, 410-535-1600 x2200.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS
OF CALVERT COUNTY, MARYLAND

Handwritten signature of David F. Hale.

David F. Hale, President

Handwritten signature of Linda L. Kelley.

Linda L. Kelley, Vice-President

Handwritten signature of Gerald W. Clark.

Gerald W. Clark

Handwritten signature of Wilson H. Parran.

Wilson H. Parran

Handwritten signature of Susan Shaw.

Susan Shaw

cc: St. Mary's County Board of County Commissioners
William R. Chambers, Chamber of Commerce Chairman
Thomas Priscilla, Jr., Engineer, FAA
Bruce Mundie, Maryland Aviation Administration
George A. Erichsen, P.E., Director, DPW&T



**CALVERT COUNTY
ECONOMIC DEVELOPMENT COMMISSION**

175 Main Street
Courthouse
Prince Frederick, Maryland 20678
Phone: 410-535-1600
<http://www.co.cal.md.us/cced>

Chair
Michael W. Benton

Board of Commissioners
Gerald W. Clark
David F. Hale
Linda L. Kelley
Wilson H. Parran
Susan Shaw

September 7, 2004

Mr. Randal A. Wiedemann, President
R.A. Wiedemann & Associates, Inc.
P.O. Box 621
Georgetown, KY 40324

Re: Captain Walter F. Duke Regional Airport

Dear Mr. Wiedemann:

At our July Economic Development Commission (EDC) meeting, Karen Everett, of the St. Mary's County Department of Economic and Community Development, gave an interesting presentation regarding the proposed plans for the expansion of the Captain Walter F. Duke Regional Airport in St. Mary's County.

The EDC would like to express our support of this expansion project. Lengthening the runway, along with other improvements in preparation for commuter air service, commercial and other general aviation use, would be quite beneficial to the Southern Maryland Region and would be a vital selling point when competing for businesses interested in relocating or expanding. Making the Southern Maryland Region more accessible can only be seen as a plus for the business community.

Please do not hesitate to contact me at 410-586-3768 should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Michael W. Benton".

Michael W. Benton
Chair