

CHAPTER 1

EXISTING CONDITIONS

101. GEOGRAPHIC STUDY AREA

The Initial Geographic Study Area for the purpose of this Study was defined in the work scope to be the Historic Triangle Area, along with both James City County, and York County. The Historic Triangle Area is normally defined to contain Historic Jamestown, the City of Williamsburg, and Yorktown (as connected by The Colonial Parkway), and their immediate geographical areas.

In an effort to first introduce the Geographical Study Area on more of a Regional scale, sections of other counties have been added to the Initial Area. These sections include parts of New Kent, King and Queen, and Henrico Counties to the north; part of Charles City County to the west; and parts of Newport News and Norfolk County to the south.

Exhibit 1-1 illustrates the Initial Geographical Study Area, along with the added sections of other counties as discussed above. As shown, from a Regional perspective, the Initial Area can be viewed as being generally centered between the Richmond Metropolitan Area to the north, and the Norfolk Metropolitan Area to the south. In addition to featured airport facilities as described below, major highways (such as Interstate 64), military installations (such as the Yorktown Naval Weapons Station), and historic areas (such as the Williamsburg, VA Colonial National Historic Park) are shown in the figure.

Exhibit 1-1
Geographic Study Area



A. AREA AVIATION FACILITIES

The following provides a basic information tabulation regarding Geographical Study Area Airports that are considered as having relevance to both this Study, and an understanding of the Study Area¹. These facilities consist of Commercial Service, Public-Use General Aviation, and Military Airports located primarily between the York River, and the James River. Facility location is indicated by general direction and distance from the Williamsburg – Jamestown Airport (JGG). Important information contained in the 2003 Virginia Air Transportation System Plan (VATSP) is also provided below. Facility location can also be viewed in Exhibit 1-1 as previously presented.

Commercial Service Airports

Airport Name: Richmond International Airport (RIC).

Location From JGG: 33 nautical (air) miles / 49 statute (driving) miles northwest.

Activity Information: The Airport accommodates approximately 1.6 million passenger enplanements, and some 121,000 total aircraft operations on an annual basis. Currently, some 75 aircraft are based at the Airport.



Runway/Approach Information: The Airport is equipped with three active runways, with the longest runway having a published length of 9,003 feet. Precision instrument approach capability is provided.

VATSP Service Role/Runway Length: A Commercial Service (CM) Role for both the existing and future period is shown. A future primary runway length of 10,300 feet is indicated.

VATSP Capacity Level: The Airport was projected to operate at 66% of available runway capacity in 2005, increasing to 86% in 2020.

Airport Name: Newport News – Williamsburg International (PHF).

Location From JGG: 12 nautical (air) miles / 21 statute (driving) miles southeast.

Activity Information: The Airport accommodates approximately 513,000 passenger enplanements, and some 227,000



¹ Source of photos: AirNav.com. Photo may not be current or correct



total aircraft operations on an annual basis. Currently, some 118 aircraft are based at the Airport.

Runway/Approach Information: The Airport is equipped with two active runways, with the longest runway having a published length of 8,003 feet. Precision instrument approach capability is provided.

VATSP Service Role/Runway Length: A Commercial Service (CM) Role for both the existing and future period is shown. A future primary runway length of 10,000 feet is indicated.

VATSP Capacity Level: The Airport was projected to operate at 103% of available runway capacity in 2005, increasing to 127% in 2020.

Airport Name: Norfolk International (ORF).

Location From JGG: 32 nautical (air) miles / 46 statute (driving) miles southeast.

Activity Information: The Airport accommodates approximately 1.9 million passenger enplanements, and some 129,000 total aircraft operations on an annual basis. Currently, some 106 aircraft are based at the Airport.



Runway/Approach Information: The Airport is equipped with two active runways, with the longest runway having a published length of 9,001 feet. Precision instrument approach capability is provided.

VATSP Service Role/Runway length: A Commercial Service (CM) Role for both the existing and future period is shown. No change in primary runway length is indicated.

VATSP Capacity Level: The Airport was projected to operate at 80% of available runway capacity in 2005, increasing to 94% in 2020.

Public-Use General Aviation Airports

Airport Name: Williamsburg – Jamestown Airport (JGG).

Location From JGG: N/A.

Activity Information: The Airport accommodates approximately 22,000 total aircraft operations on an annual basis. Currently, some 77 aircraft are based at the Airport.



Runway/Approach Information: The Airport is equipped with one active runway having a published length of 3,204 feet. The Airport offers one non-precision circling instrument approach.

VATSP Service Role/Runway Length: A General Aviation – Community (GC) Role for both the existing and future period is shown. No change in runway length is indicated.

VATSP Capacity Level: The Airport was projected to operate at 10% of available runway capacity in 2005, increasing to 15% in 2020.

Airport Name: New Kent County Airport (W96).

Location From JGG: 25 nautical (air) miles / 38 statute (driving) miles northwest.

Activity Information: The Airport accommodates approximately 26,000 total aircraft operations on an annual basis. Currently, some 46 aircraft are based at the Airport.



Runway/Approach Information: The Airport is equipped with one active runway having a published length of 3,600 feet. The Airport offers non-precision instrument approach capabilities.

VATSP Service Role/Runway Length: A General Aviation – Community (GC) Role for both the existing and future period is shown. No change in runway length is indicated.

VATSP Capacity Level: The Airport was projected to operate at 7% of available runway capacity in both 2005 and 2020.

Airport Name: Middle Peninsula Regional Airport (FYJ).

Location From JGG: 17 nautical (air) miles / 31 statute (driving) miles north.

Activity Information: The Airport accommodates approximately 15,000 total aircraft operations on an annual basis. Currently, some 34 aircraft are based at the Airport.



Runway/Approach Information: The Airport is equipped with one active runway having a published length of 5,000 feet. The Airport offers non-precision instrument approach capabilities.

VATSP Service Role/Runway Length: A General Aviation – Regional (GR) Role for both the existing and future period is shown. There is no increase in runway length anticipated.

VATSP Capacity Level: The Airport was projected to operate at 6% of available runway capacity in 2005, increasing to 11% in 2020.

Military Airports

Airport Name: Camp Peary Landing Strip (W94).

Location From JGG: 6 nautical (air) miles / 7 statute (driving) miles northeast.

Activity Information: Activity information is not currently published.



Runway/Approach Information: The Facility is equipped with one runway having a published length of 5,018 feet. The Facility offers (military) non-precision instrument approach capabilities.

Potential for Public/Joint Use: The military mission associated with this Facility is not anticipated to change. Restrictions to civil aviation and public-use are not anticipated to be removed in the foreseeable future.

Airport Name: Felker AAF.

Location From JGG: 8 nautical (air) miles / 9 statute (driving) miles southeast.

Activity Information: Activity information is not currently published.

Runway/Approach Information: The Facility is equipped with one runway having a published length of 3,020 feet. No civil instrument approach information is currently published for this facility.



Potential for Public/Joint Use: The military mission associated with this facility is not anticipated to change. Restrictions to civil aviation and public-use are not anticipated to be removed in the foreseeable future.

Airport Name: Langley Air Force Base

Location From JGG: 20 nautical (air) miles / 28 statute (driving) miles southeast.

Activity Information: Activity information is not currently published.

Runway/Approach Information: The Facility is equipped with one runway having a published length of 10,000 feet.



Potential for Public/Joint Use: The military mission associated with this facility is not anticipated to change. Restrictions to civil aviation and public-use are not anticipated to be removed in the foreseeable future.

102. AREA OF INFLUENCE

The Initial Geographical Study Area can be refined by considering the location of the existing Williamsburg – Jamestown Airport, along with the locations of other existing public-use airports serving general aviation activity, in the vicinity. The objective here is to determine the Geographical Area of Influence that the Williamsburg – Jamestown Airport has with regard to influencing the distribution of General Aviation Activity in the area.

The Area of Influence to be used in this Study has been logically established. The Area of Influence is bounded by three existing publicly owned, public-use airports that are considered to be located near or slightly beyond the outer

portions of the potential Williamsburg – Jamestown Aviation Service (Market) Area. As illustrated in Exhibit 1-2 the three outlying boundary airports are:

- **New Kent County Airport (W96)**, located in New Kent County approximately twenty-five nautical miles northwest of the Williamsburg – Jamestown Airport.
- **Middle Peninsula Regional Airport (FYJ)**, located in King and Queen County approximately seventeen nautical miles north of the Williamsburg – Jamestown Airport.
- **Newport News – Williamsburg International Airport (PHF)**, located in Newport News County approximately twelve nautical miles southeast of the Williamsburg – Jamestown Airport.

Exhibit 1-2
Area of Influence



The next section will consider aviation activity, airport capacity, and competition factors associated with the defined Area of Influence and related airports. The analysis will result in the establishment of the Williamsburg – Jamestown Aviation Service Area.

103. WILLIAMSBURG-JAMESTOWN AVIATION SERVICE AREA

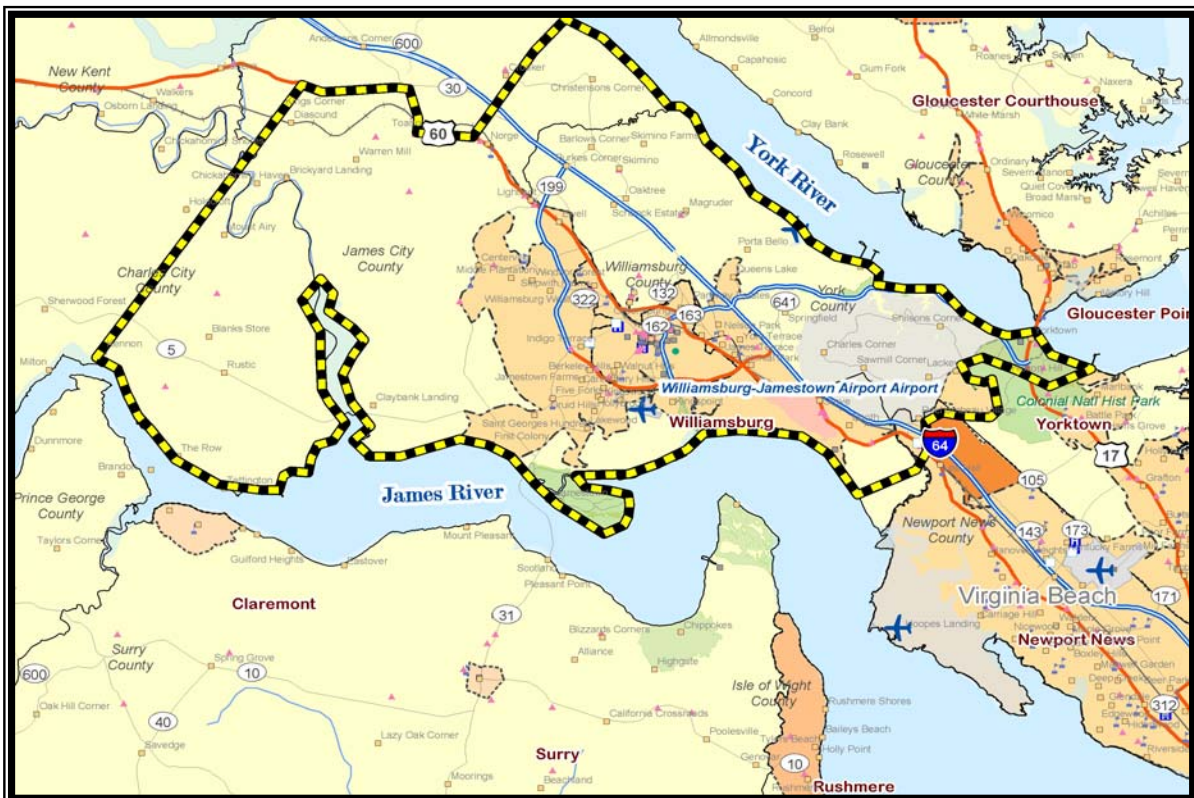
Historically, various surveys have been conducted to determine how far various general aviation airport users are willing to drive to gain access to an airport. The

results of these surveys indicate that the majority of general aviation airport users prefer a drive of 30 minutes or less to gain access to an airport. The 2003 Virginia Air Transportation System Plan (VATSP) also recognizes a 30 minute driving time as an important factor when considering the service area of a general aviation airport.

While a 30-minute driving time (isochronal) can be used as a starting point with regard to service area analysis, many other factors need to be considered. These factors include the location of other competing airports, the facilities offered at competing airports (such as hangar space and runway length), the availability of capacity (or congestion) found at competing airports, and access constraints such as the presence of large bodies of water, or lack of roadways.

With regard to the Williamsburg – Jamestown area, a Primary Aviation Service Area has been established as illustrated in Exhibit 1-3. This Area is considered to be the “primary” service area because the vast majority of based aircraft owners / renter pilots are anticipated to originate from this area. This statement is supported by a review of the existing based aircraft owner mailing list for the existing Williamsburg – Jamestown Airport, which shows that a very high percentage of owners (almost 70 percent) reside in the Williamsburg Virginia area. The established Primary Aviation Service Area considers the 30 minute driving time isochronal, which has been adjusted in consideration of the locations of the three neighboring airports discussed above in Section 1.3 “Area of Influence”, as well as many of the factors discussed above.

Exhibit 1-3
Primary Aviation Service Area





As shown, the Primary Aviation Service Area considers the locations of the Jamestown River and the York River, as well as the area highway system. Both are important factors when considering service area driving times. Other geographical features are also shown in Exhibit 1-3. These include major military installations (such as Camp Peary, the U.S. Naval Supply Center, the Yorktown Naval Weapons Station, and Fort Eustis. These military installation areas are not anticipated to appreciably influence civil aviation activity in the Williamsburg – Jamestown Aviation Service Area. Major environmental related areas are also shown (such as the Newport News Park and Reservoir, and the Chickahominy Wildlife Management Area. These environmentally restricted areas are anticipated to remain undeveloped.

The Primary Aviation Service Area generally extends north/northwest along Interstate 64 and U.S. Highway 60, reaching its far point near the community of Lanexa. It is considered that both the existing New Kent County Airport and the existing Middle Peninsula Regional Airport will serve the geographical area north of the Primary Aviation Service Area. As indicated in the VATSP and based on airport visits, both of these Airports have adequate capacity to serve their respective market areas, and major improvements are being planned to accommodate anticipated future users. As a point of reference, optimum driving time from the existing Williamsburg – Jamestown Airport to the New Kent County Airport and Middle Peninsula Regional Airport were determined to be 45 minutes and 41 minutes, respectively. This supports the logical placement of the north/northwest Primary Aviation Service Area boundary, which recognizes the inefficiency of duplicate airport facilities serving the same market area.

Considering the location of Route 5, the Primary Aviation Service Area extends slightly into Charles City County located to the west of James City County. It is anticipated that the geographical area to the west/northwest of this segment of the Aviation Service Area will primarily be served by the existing New Kent County Airport.

To the south/southeast, the Primary Aviation Service Area generally follows Interstate 64 and the Colonial Parkway, reaching its far point at Yorktown. It is noted that this segment of the Aviation Service Area extends to an area in close proximity to the existing Newport News – Williamsburg International Airport. As indicated in the VATSP and based on an airport visit, this Commercial Service Airport is reaching airfield capacity, and continues to serve a growing percentage of airline and large business /corporate aircraft activity. This, along with a limited land area for additional (smaller) general aviation facility development is anticipated to cause some general aviation users to seek a less congested airport facility. As a point of reference, optimum driving time from the existing Williamsburg – Jamestown Airport to the Newport News – Williamsburg International Airport was determined to be 26 minutes.

The results of the above Williamsburg – Jamestown Aviation Service Area analysis will be used to consider the demand for aviation services within the defined Aviation Service Area in Chapter Two, titled “Aviation Forecasts”.

104. AREA AIRSPACE STRUCTURE

Airspace is defined as the portion of the atmosphere above a particular land area, especially above a nation. To efficiently and effectively manage the large amount of air traffic that traverses the sky each day, the atmosphere above the United States is divided into several sectors, or classes.

There are six (6) classes of airspace. *Controlled Airspace* is a general term that covers five of the six classes. These classes are Class A, Class B, Class C, Class D, and Class E. While operating in controlled airspace, the pilot is subject to certain operating rules, as well as pilot qualifications and aircraft equipment requirements. Class G airspace is referred to as *Uncontrolled Airspace*. FAA Air Traffic Control (ATC) does not exercise control of air traffic in Class G airspace. A more detailed description of airspace may be found at Attachment 1-A.

Unlike driving a car, there are no guidance signs in the sky to alert pilots when they are entering into a different class of airspace. The signposts that pilots do have are dimensioned and depicted on aeronautical charts. Exhibit 1-4 illustrates a portion of the Sectional Aeronautical Chart that highlights the airspace structure in the vicinity of James City County, and the defined Williamsburg – Jamestown Aviation Service Area.

Exhibit 1-4
Sectional Aeronautical Chart





→ **Class E Non-Surface Based Controlled Airspace**

The magenta colored irregular box area that fades toward the Williamsburg – Jamestown Service Area (as indicated in Exhibit 1-4) designates Class E non-surfaced based controlled airspace. This Class E airspace begins at an elevation of 700 feet above the surface. Other Class E non-surface based airspace extends outward beyond the rectangular magenta (fading) area, where it begins at an elevation of 1,200 feet above the surface. Basic VFR weather minimums for aircraft operating in Class E airspace requires a flight visibility of three statute miles, and a distance from cloud requirement of 500 feet below, 1,000 feet above, and 2,000 feet horizontally.

→ **Class E Surface Based Controlled Airspace.**

An area of Class E surface based controlled airspace is also shown in Exhibit 1-4). This Class E surface based airspace is designated by the magenta colored dash lined box area that extends from a southeast direction to the northwest and ends adjacent to the existing Williamsburg – Jamestown Airport symbol. This Class E surface based airspace helps protect instrument approach airspace associated with the Felker AAF military airport facility located to the southeast. When Class E surface based airspace is in effect, aircraft operating under Visual Flight Rules (VFR) are restricted from operating beneath a ceiling in the surface area when the ceiling is less than 1,000 feet. Also, three statute miles visibility is required.

→ **Military Training Route.**

As also shown in Exhibit 1-4, a notable Military Training Route (VR1753) exists to the north area of the Williamsburg – Jamestown Aviation Service Area. This route is orientated in a northeast – southwest direction. Military operations are conducted on this route in VFR conditions at an altitude of at or below 1,500 feet above the surface.

→ **Departure Procedure**

With regard to the existing Williamsburg – Jamestown Airport, one published Departure Procedure exists for the Airport. The procedure indicates a Take-Off (weather condition) minimum of a ceiling of 300 feet and a visibility minimum of one statute mile for departures on Runway 31.

→ **IFR Airspace Control**

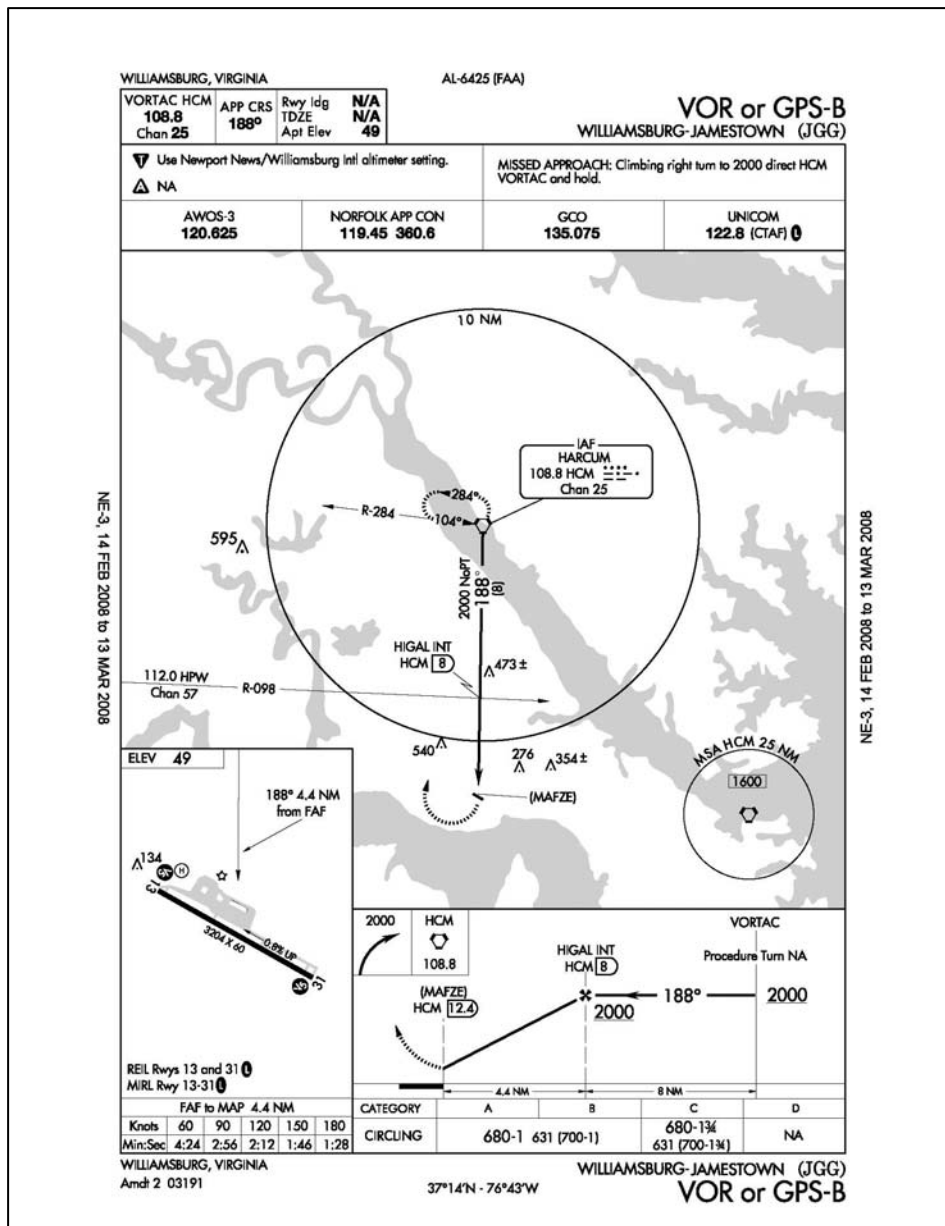
Instrument Flight Rules (IFR) airspace in the area is primarily controlled by the Norfolk Approach Control Facility, and it is noted that one Instrument Approach Procedure is published for the Williamsburg – Jamestown Airport as shown in Exhibit 1-5.



The Very High Frequency Omni-Directional Radio Range or Global Positioning System (VOR or GPS-B) Approach is considered a circling procedure because the final approach course is not closely aligned with the runway centerline. The approach offers a Minimum Decent Altitude (MDA) of 680 feet above Mean Sea Level (MSL), which translates to a height of 631 feet above airport elevation. One statute mile visibility is required for aircraft in Approach Category A and B. This visibility minimum increases to one and three quarter mile for aircraft in Approach Category C.

The airspace structure in the vicinity of James City County, and the defined Williamsburg – Jamestown Aviation Service Area is not considered to appreciably congested, constrained, or restricted.

**Exhibit 1-5
JGG Instrument Approach**



105. TRAFFIC PATTERNS AND NOISE ABATEMENT PROCEDURES

A traffic pattern is the rectangular path that aircraft use to fly in the vicinity of an airport. It consists of an upwind, crosswind, downwind, base, and final leg. Normally, all turns in a traffic patterns are to the left.



Four (4) noise abatement procedures have been established at the Williamsburg – Jamestown Airport to help mitigate aircraft noise exposure to the surrounding communities, and support the Airport's good neighbor policy. These procedures are described below.

- Right Hand Traffic Pattern For Runway 13: Aircraft normally make left turns when maneuvering in the airport traffic pattern. This is known as a "Standard Left Hand Pattern". However, for aircraft operating on Runway 13 at the Airport, a (nonstandard) Right Hand Traffic Pattern has been established. This procedure allows aircraft to maneuver primarily near the James River, and away from more noise sensitive areas, located to the south and east of the Airport.
- Runway 31 Preferred For Landing Aircraft: When wind and other conditions allow, Runway 31 is designated as the preferred landing runway to help avoid noise sensitive areas.
- Runway 31 Noise Abatement Departure Procedure: When departing on Runway 31, aircraft are advised to turn left to a heading of 270 degrees as soon as practicable to avoid noise sensitive areas.
- Runway 13 Noise Abatement Departure Procedure: When departing on Runway 13, aircraft are advised to turn right as soon as practicable to avoid noise sensitive areas.

106. OBSTRUCTIONS

To ensure a safe operating environment for aircraft, both the FAA and the Virginia Department of Aviation (DOAV) have developed a set of standards in the form of imaginary surfaces that are designed to help ensure that the airspace used by aircraft is free of obstructions that may pose a safety hazard. Of particular concern for the purposes of this Study are the approach surfaces to the runway. It should be noted that there are many different types of approaches and, therefore, many different associated imaginary approach surfaces. The surfaces analyzed for this Study were:

- DOAV Visual Approach Standards
- FAA Threshold Siting Night Circling
- FAR Part 77



Large scale drawings depicting the results of the surface evaluations were provided to the Community Airport Committee, DOAV, and the FAA in a separate series of drawings. It should be noted that, while there were some obstructions identified, none were considered to be limiting or significant relative to the existing Airport.

107. SPECIAL USE PERMIT

Introduction

Located within the political jurisdiction of James City County, the Williamsburg – Jamestown Airport operates under a Special Use Permit (SUP). Presently, (SUP-1-04) as adopted on June 8, 2004 by the James City County Board of Supervisors is in full effect.

This section of the Report is intended to briefly outline the history of the SUP, and define the conditions contained within the SUP that are related to Airport development / improvements, and operational procedures. A copy of the full SUP can be found in Appendix “A”.

The relevance of the conditions, and their influence with regard to Airport operations, improvement potential, and development potential, will be addressed in Chapter Six, titled Alternatives Evaluation.

History

James City County documentation confirms that the Airport officially opened in 1970 as a privately owned airport operated for use by the general public. In 1986, a Special Use Permit Application (SUP-26-85) was approved by the Board of Supervisors, which made the Airport use a legal conforming use in the R-8 Zoning District. In this regard, a special use permit is required for airports and accessory uses in the R-8 Rural Residential Zoning District in which the Airport is located.

In 1997, the Board of Supervisors approved (SUP-23-97), which permitted phased development of the Airport over a 20 year period, as detailed in a Master Plan Study completed in 1993.

Furthermore, in 2004, the Board of Supervisors approved (SUP-16-04), which, by amendment, provided for the construction of proposed T-Hangars on Parcel No. (1-12). The conditions previously contained in (SUP-23-97) were carried forward within (SUP-16-04), which represents the current SUP.

An Airport Layout Plan Update Study and accompanying Narrative Report were completed in 2006. In part, the Narrative Report states that:

The Airport Layout Plan “depicts the specific facilities that James City County has approved under the Special Use Permit. As such, any recommendations for



facilities that, based on the forecasts, will exceed the limitations of the SUP, must be presented to James City County and approval secured for another amendment to the SUP”.

With regard to Ultimate Development shown on the 2006 Airport Layout Plan, the Narrative Report states that “This Ultimate development is significant as the Special Use Permits issued by James City County do not include approvals of any airport development labeled as Ultimate”.

Summary of Conditions Listed in (SUP-16-04) as related to Airport development / improvements and operational procedures.

1) No extension of the existing runway shall be permitted. A paved safety overrun adjacent to Runway 13 (western end of runway), not to exceed 900 feet may be constructed in accordance with FAA standards. The paved safety overrun shall be marked appropriately and lights shall be installed and maintained across the width of the runway to delineate the runway and safety overrun.

2) The Williamsburg-Jamestown Airport shall review, revise, and publish, as necessary, the description of the airport and associated local rules, procedures, and warnings in the following industry publications:

- a. Airport Facility Directory
- b. VDOA (5010) Inspection Form-Remarks/Runway section.
- c. Permanent NOTAM (Class II).

These publications shall indicate the established flight patterns and procedures and notify all pilots of the special established patterns to avoid the surrounding residential neighborhoods and Rawls Byrd Elementary School. This condition shall be satisfied prior to the issuance of a building permit for any of the proposed improvements contained within the Master Plan. Documentation shall also be submitted to the Community Airport Committee.

Also the following steps shall be taken:

- a. Report the basic pertinent information by UNICOM when pilots check in for takeoff and landing operations.
- b. Identify/distribute information through a published set of “Airport Rules and Regulations”.
- c. Post/display Special Operating Procedures in the flight planning area and other conspicuous areas of the terminal building.

3) The Airport Procedures shall be amended to require runway preference for runway 31 for all arriving aircraft, not just twin-engine aircraft as stated in the current Airport Procedures.

4) Signs shall be erected at both ends of the runway which read as follows:



For departures on Runway 31: “Remember to turn left to avoid flying over the Elementary School”.

For departures on Runway 13: “Remember to make right turn for noise abatement”.

5) Approval of the facilities contained in the Master Plan in no way obligates the County to approving the construction of these facilities. The proposed facilities shall undergo the typical site plan and building plan review process and receive County approval before construction of these facilities and improvements shall commence.

6) A lighting plan shall be prepared and approved by the Planning Director for each site plan submitted that contains outdoor lighting. All outdoor lighting, exclusive of lights for the runway, taxiways, and other required safety lighting, shall have recessed lenses.

7) The following size limitations shall apply to the planned facilities:

T-Hangar Units	63 units* maximum
Corporate Hangar Units	14 units* maximum
Apron Parking Tie-Downs	49 spaces maximum
Terminal Building Expansion	2,500 square feet maximum –
Total size of building shall not exceed 7,327 square feet (4,327 + 2,500)	
Flight Management Building	2,500 square feet maximum

* For T-Hangars and Corporate Hangars – 1 unit is equivalent to 1 aircraft parking space.

8) The improvements labeled as “Ultimate” on the Master Plan are not approved as part of this application. A 25-foot wide paved apron shall be permitted between the helipads (Stage III) and Hangar 14 (Stage I). The purpose of this paved apron would be to provide access to hangars on the west side of the airport.

9) No GPS “straight-in” approach procedure shall be permitted at the Airport.

10) The corporate hangars may include attached accessory office space that is exclusive of the airplane storage area. The office area shall be used / occupied by the owners or tenant of the corporate hangar to which the office / storage area is attached. The use of the office space shall be strictly limited to airport-related activities. The cumulative amount of office space attached to corporate hangars shall not exceed 5,000 square feet (i.e., five corporate hangars with 1,000 square feet office space OR two corporate hangars with 2,500 square feet - the other three shall contain no office space, or any combination thereof not to exceed 5,000 square feet).

11) A landscaped buffer around the perimeter of the site shall be maintained or established which accomplishes the goal of screening the proposed airport improvements from adjacent properties. The Planning Director shall determine whether additional landscaping is needed to screen future improvements from adjacent properties at the time of site plan review.

108. EXISTING FACILITIES

As a part of the Study, an on-site inspection of all Williamsburg-Jamestown Airport facilities was conducted primarily to determine the types of facilities that are located on the Airport, as well as their condition. It should be noted that an in-depth engineering analysis of these facilities was not conducted.

→ **Runway:** The Airport has a single paved runway (13-31) that is 3,204 feet long and 60 feet wide. The overall condition of the surface is fair to good.



→ **Taxiways:** Access to/from the runway is provided by a full length parallel taxiway, which is 30 feet wide; there are four (4) connector taxiways – one at each end of the runway and two (2) midfield taxiways that are 40 feet wide. There are portions of the taxiway system that are in need of surface rehabilitation.



→ **Aprons:** There are two (2) main aircraft parking aprons. Most of the surfaces are in fair condition; however, there are some areas in need of rehabilitation.

→ **Terminal Building:** The Terminal Building is in excellent condition. It contains flight planning facilities, a pilot shop, as well as a restaurant; conference services are available.



→ **Hangars:** There are both T-hangars and unit hangars on the Airport. The structures appear to be in good to excellent condition.



→ **Fuel Storage Facilities:** Both Jet A and 100LL fuels are available at the Airport. Storage is provided in two 12,000 gallon above-ground fuel tanks.



→ **Airport Access Road:** Access to the Airport is via Marclay Road. It is in very poor condition.

Overall, the Airport appears to be in good condition, with no major condition issues noted.

109. SOCIOECONOMIC DATA

A. Population, Income, & Employment

1. Population

The Commonwealth of Virginia is divided into 95 counties and 36 independent cities, which are considered county-equivalents for census purposes. James City County, York County, and the City of Williamsburg will be the focus for presentation of demographic data. All are included in the Geographic Study Area (GSA) used for the evaluation of existing airport conditions and to determine in the potential aviation demand within the defined GSA. Although not all Airport studied are included in these 2 counties, highlights for various demographic components relating to applicable counties will be highlighted and discussed as necessary.

Based on the 2006 population census estimates, York County and James City County were ranked 29th and 31st out of 134, respectively. Both counties contributed approximately 1.6% to Virginia's total population of 7.6 million. Trends were similar based on census data for 2000. Williamsburg is classified as an independent city for Census purposes and was ranked 109th. With a few



exceptions for Williamsburg, population has steadily increased since 1930 with details provided in the Table 1-1 below.

Table 1-1 Geographic Study Area (GSA) Population for 1990 - 2006 ²									
JAMES CITY COUNTY				YORK COUNTY			WILLIAMSBURG CITY		
Date	Population	Chg	Annual % Chg	Population	Chg	Annual % Chg	Population	Chg	Annual % Chg
1900	3,688	-	-	7,482	-	-	2,044	-	-
1910	3,624	(64)	-0.2%	7,757	275	0.4%	2,714	670	3.6%
1920	3,676	52	0.2%	8,046	289	0.4%	2,462	-252	-1.0%
1930	3,879	203	0.6%	7,615	-431	-0.6%	3,778	1,316	5.9%
1940	4,907	1,028	2.9%	8,857	1,242	1.8%	3,942	164	0.5%
1950	6,317	1,410	3.2%	11,750	2,893	3.6%	6,735	2,793	7.9%
1960	11,539	5,222	9.2%	21,583	9,833	9.3%	6,832	97	0.2%
1970	17,853	6,314	6.1%	33,203	11,620	6.0%	9,069	2,237	3.6%
1980	22,763	4,910	3.1%	35,463	2,260	0.8%	9,870	801	1.0%
1990	34,970	12,207	6.0%	42,422	6,959	2.2%	11,530	1,660	1.9%
2000	48,102	13,132	4.2%	56,297	13,875	3.6%	11,998	468	0.5%
2006-est	59,741	11,639	4.8%	61,879	5,582	2.0%	11,793	-205	-0.3%

In addition, the James City County Planning Division provided second quarter population estimates / projections for the years 2001 through 2030 for James City County. Increases are expected for all years. This Division has estimated the population at 61,249 persons as of 3rd quarter 2007 and has projected that population will reach 94,773 persons by 2030.

The Williamsburg-Jamestown Airport is situated in James City County and is located three (3) miles south west of the City of Williamsburg. This is the only Airport being studied that is located in the GSA. Given the population increases to date in these geographic areas as well as continued increases per the projections provided for James City County, one could conclude that some of the increase can only mean additional need for aviation services. The historical triangle GSA is all contained in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area (MSA).

The census estimate for 2006 also shows a significant increase in Virginia's population from roughly 7.1 million persons at 2000 to 7.6 million, an increase of approximately 8%. This state's population was ranked 12th in the nation. Persons per square mile per the 2000 Census was ranged from a low of 336

² U.S. Bureau of Census via Real Estate Center website - www.recenter.tamu.edu/data, accessed November 8, 2007



persons for James City County to a high of 1,333 for the City of Williamsburg. York County reported 531 persons per square mile.

2. Personal Income

Personal income is the sum of all wages and salaries, including government subsidies, received by persons and then divided by the resident population of that area. According to the Bureau of Economic Analysis (BEA) - Bearfacts, James City County and Williamsburg had a per capita personal income (PCPI) of \$41,401 in 2005 and ranked 7th in the state. Likewise, the same information for both York and the City of Poquoson was \$36,964. Both of the results exceed the national average of \$34,471. In addition, the PCPI for James City County and Williamsburg exceeded the Virginia PCPI of \$39,564. Virginia's PCPI ranked 15th in the United States.

Table 1-2 displays the PCPI of surrounding counties, West Virginia, North Carolina, and Virginia. The average annual growth rate for both the nation and Virginia from 1995-2005 was 4.2%. The average annual growth rate of PCPI for most of the adjacent areas are close or exceed the national annual growth rate with the exception of New Kent and Surry counties.

Table 1-2 Per Capita Personal Income, 1995- 2005 ³		
County or City, State	2005	Growth Rate 1995-2005 (PCPI)
James City County and Williamsburg, VA	\$41,401	5.3%
York County and Poquoson, VA	\$36,964	4.6%
Charles City County, VA	\$28,578	5.0%
Gloucester County, VA	\$29,271	4.2%
Hampton, VA	\$30,389	4.8%
King and Queen County, VA	\$27,720	4.6%
New Kent County, VA	\$30,189	3.5%
Newport News, VA	\$28,436	4.3%
Surry County, VA	\$25,101	3.1%
West Virginia	\$26,435	4.1%
North Carolina	\$30,785	3.8%
Virginia	\$37,974	4.7%

The cost to relocate to James City County and York demands a higher income level, which is supported by the results presented in Table 1-2. James City County and the city of Williamsburg have a combined PCPI of \$41,401 which far exceeds the state PCPI of \$37,974. The average annual growth rate from 1995-2005 was 5.3% compared to the state average of 4.7%.

³ Source: Bureau of Economic Analysis (BEA) - Bearfacts, <http://www.bea.gov/region/bearfacts/> Accessed November 9, 2007.



B. Employment

There are a significant number of businesses located in the Counties/Cities contained in the GSA and surrounding area. The locations referenced in Table 1-3 below account for approximately 6% of Virginia's total business establishments. The data presented excludes details for self-employed individuals, employees of private households, railroad employees, agricultural production employees, and most government employees.

Table 1-3 Business: Establishments, Employees & Payroll 2005⁴			
County or City, State	Total Establishments	No. Employees	Payroll (\$1,000)
Charles City County, VA	194	2,114	\$57,985
Gloucester County, VA	940	7,173	\$160,404
Hampton, VA	2,480	47,354	\$1,344,547
James City County, VA - * GSA	1,308	16,395	\$517,038
King and Queen County, VA	128	862	\$19,833
New Kent County, VA	296	1,955	\$53,941
Newport News, VA	3,904	87,452	\$3,000,770
Surry County, VA	79	1,419	\$90,562
Williamsburg, VA - * GSA	768	16,588	\$421,744
York County, VA - * GSA	1,391	15,217	\$404,751

The economic base for the GSA is relatively diverse with retail trade, professional, scientific & technical services, construction, health care/social assistance, other services, and accommodation & food services sectors representing the primary employers. Given the rich history of the GSA and related attractions, it is not surprising that retail trade and accommodation & food services are highly represented in the GSA. Table 1-4 highlights the number of jobs by industry.

⁴ Source: U.S. Census Bureau, County Business Patterns (NAICS) -2005 - <http://censtats.census.gov/cbpnaic/cbpnaic.shtml>. Accessed November 12, 2007.



Table 1-4⁵			
GSA Industry Overview, 2005			
Industry	Number of Jobs		
	James City County	York County	Williamsburg
Total by place of work	1,308	1,391	768
Forestry, Fishing, Hunting, and Agriculture Support	2	8	1
Mining	1	2	1
Construction	236	242	39
Manufacturing	29	36	6
Wholesale Trade	39	44	12
Retail Trade	212	248	148
Transportation and Warehousing	21	24	8
Information	16	15	14
Finance and Insurance	70	56	50
Real Estate and Rental & Leasing	69	49	47
Professional, Scientific & Technical Services	173	144	75
Management of Companies & Enterprises	10	4	2
Administrative, Support, Waste Management and Remediation Services	87	109	29
Educational services	6	13	13
Health Care and Social Assistance	117	72	79
Arts, Entertainment, and Recreational	27	24	14
Accommodation and Food Services	85	123	165
Other services, excluding Public Administration	102	176	65
Unclassified	6	2	0

⁵ Source: U.S. Census Bureau, County Business Patterns (NAICS) -2005 - <http://censtats.census.gov/cbpnaic/cbpnaic.shtml>. Accessed November 12, 2007.



The largest employers for the GSA at third quarter 2007 are listed in Table 1-5 below.

Table 1-5			
Major Employers ⁶			
Rank	James City County	York County	Williamsburg
1.	Williamsburg James City County School Board	York County School Board	College of William and Mary
2.	Eastern State Hospital	County of York	Colonial Williamsburg Foundation
3.	County of James City	Wal Mart	Colonial Williamsburg Hotel
4.	Wal Mart	Anheuser Busch, Inc.	Sentara Healthcare
5.	Jamestown Yorktown Foundation	Water Country USA	Aramark Campus
6.	Selective HR Solutions	U.S. Department of Defense	City of Williamsburg
7.	Riverside Regional Medical Center	The Great Lakes Companies Inc	Red Lobster & The Olive Garden
8.	Williamsburg Plantation	Fairfield Williamsburg	Fashions Outlet of America

The rate of unemployment has always been closely related to the prosperity of manufacturing and related industries. Historically, both James City County and York County had above average unemployment rates compared to Virginia and other surrounding counties (reference Table 1-6). Virginia's unemployment rate at 2006 was 3.0%, compared to 2.6% for both James City and York Counties. Williamsburg has not fared as well posting an unemployment rate of 5.8%. In addition, 2004 median household income for James City and York Counties was approximately 30% higher than the Virginia's average of \$51,103.

⁶ Source: Virginia Employment Commission, <http://www.vec.virginia.gov>, Accessed March 6, 2008



Table 1-6								
Unemployment Rates (%) Surrounding Counties/States 1999-2006 ⁷								
County	1999	2000	2001	2002	2003	2004	2005	2006
Charles City County, VA	2.7	2.4	4.9	5.2	5.0	5.0	4.3	3.9
Gloucester County, VA	2.3	1.9	2.4	3.1	3.1	3.0	3.0	2.6
Hampton, VA	3.9	2.7	3.5	5.1	5.1	4.6	4.4	3.6
James City County, VA - *GSA	1.9	2.0	2.5	3.2	3.1	3.3	3.1	2.6
King and Queen County, VA	3.1	2.5	3.3	4.3	4.5	3.8	3.8	3.3
New Kent County, VA	1.9	1.8	3.0	3.5	3.5	3.4	3.2	2.7
Newport News, VA	3.9	2.6	3.5	4.7	4.9	4.4	4.4	3.5
Surry County, VA	7.5	2.9	3.3	4.4	4.5	4.1	4.7	3.3
Williamsburg, VA - *GSA	5.6	4.3	5.7	7.3	8.2	7.5	7.1	5.8
York County, VA - *GSA	2.0	1.9	2.5	3.0	3.1	3.0	3.0	2.6
West Virginia	6.3	5.5	5.2	5.9	6.0	5.3	5.0	4.9
North Carolina	3.3	3.7	5.6	6.6	6.4	5.5	5.2	4.8
Virginia	2.7	2.3	3.2	4.2	4.1	3.7	3.5	3.0

110. ENVIRONMENTAL OVERVIEW

Because the potential for future public ownership is being evaluated as a part of this Study, it is important to understand that, as a publicly-owned facility, the Airport may then become eligible for Federal funding under the Federal Aviation Administration’s (FAA) Airport Improvement Program (AIP). Projects funded under the AIP program must comply with Federal guidelines regarding the environment. The consideration of environmental factors is delineated in Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policies Act of 1969 (NEPA). The NEPA statute and CEQ regulations, which are necessary anytime federal funding or a federal action is involved, require the integration of the NEPA process with other planning at the earliest possible time. Doing this early in the planning process helps incorporate environmental factors in project planning and development, avoid delays and second-guessing later in the NEPA process, and can head off potential conflicts. The principal objective of an environmental overview is to document environmental conditions that should be considered in the identification and analysis of airport development alternatives. Typically, the overview includes the following information:

- ➔ Items known from prior environmental and planning documents, and from the expertise of environmental professionals, community planners, and resource agencies;
- ➔ Items that can be easily seen during a walking survey of the airport or off-airport area; and

⁷ Source: United States Department of Agriculture, Economic Research Service – Datasets – <http://www.ers.usda.gov/Data/unemployment/>, Accessed October 12, 2007



- Information from various types of available environmental resource maps of the airport area.

The overview is intended to provide information regarding obvious environmental resources that could potentially affect the planning of proposed development. It does not involve substantial investigations such as wetland delineations or cultural resource studies. Please note that many of the following environmental discussions reference Figure numbers. All of the Figures are contained in Attachment 1-B

The FAA standards for NEPA compliance are found in FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, and Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, and *The Environmental Desk Reference for Airport Actions*. For the purposes of this Study, the environmental categories contained in those standards to be evaluated are:

- **Air quality (EPA Green Book review only)**

According to the FAA Environmental Desk Reference for Airport Actions Chapter 1, a detailed air quality analysis is required for a project that has the potential to affect the attainment and maintenance of established air quality standards due to the projects size, scope, or location. The EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide) in accordance with the Clean Air Act. Geographic areas across the country have been rated as being in attainment, nonattainment, or as a maintenance area with regard to the above pollutants. Attainment areas are identified as areas in which levels of all criteria air pollutants meet the NAAQS. Nonattainment areas are identified as areas in which levels of one more pollutants is above the NAAQS. Maintenance areas are defined as areas formerly in nonattainment.

According to The EPA Green Book, the Williamsburg-Jamestown Airport is in an attainment area for the following air pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter PM-10, particulate matter PM-2.5 and lead. However, the Williamsburg Jamestown Airport is located within a 1-hour ozone and 8-hour ozone maintenance area. According to the Environmental Desk Reference, general conformity regulations apply for Federal actions located in a maintenance designated area for any of the six criteria pollutants. For National Environmental Policy Act (NEPA) purposes, an air quality analysis is normally necessary depending on the size of the airport and nature of a project

In accordance with EPA's exempted action of administrative, planning, enforcement, and inspection activities, the proposed feasibility study is an exempt project under CAA General Conformity. However, should specific



project activities occur, a more detailed review of potential effects to air quality must be analyzed.

→ **Coastal Zone Management**

In accordance with Chapter 4 of the FAA Environmental Desk Reference for Airport Actions, all airport actions occurring in or affecting coastal zones identified within the coastal zone management program must comply to meet the requirements of the Coastal Zone Management Act of 1972.

According to the Virginia Department of Environmental Quality (VA DEQ) Virginia Coastal Zone Management Program (Virginia CZM Program), the Williamsburg-Jamestown Airport is located within a coastal zone (Figure 1). Conservation lands, non-tidal wetlands, tidal wetlands, and anadromous fish use areas located within the coastal zone adjacent to the airport. Anadromous fish are identified as fish that live mostly in the sea but breed in fresh water. Due to no specific planned projects being identified for this feasibility study, there will be no impacts to the coastal zone at this time. However, future projects would require coordination with VA DEQ and an analysis of impacts to the coastal zone.

→ **Compatible land use**

Chapter 5 of the FAA Environmental Desk Reference for Airport Actions states “the compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of noise impacts related to that airport”. It also states that land use within the vicinity of the airport should be assessed so as not to adversely affect safe aircraft operations. Specific planned projects have not been identified as a part of this feasibility study. As such, this section will discuss existing land use within and adjacent to airport property utilizing The National Map (<http://nationalmap.gov/>) provided by USGS (Figure 2).

The airport property primarily consists of commercial / industrial/ transportation land. The current land use surrounding the airport consists of pasture/hay, row crops, emergent herbaceous and woody wetlands, evergreen and deciduous forests, low and high intensity residential, bare rocks/sand/clay, and quarries/strip mines/gravel pits. There is a closed and sealed landfill, as well as a mulching/recycling operation on airport property. Due to the airport being situated within a coastal zone, having surrounding wetlands and residential areas, and being located within a 100 year floodplain, the effects on the land use by future proposed projects must be analyzed.

In addition, the 2003 James City County Comprehensive Plan identified land surrounding the airport as low density residential. If land development should take place, the timing and intensity of development



will be conditioned on the sufficient buffering and screening of adjacent property and the maintenance of an acceptable level of service for roads and other public services (2003 James City County Comprehensive Plan page 130).

→ **Department of Transportation Act: Sec 4(f)**

The FAA Environmental Desk Reference for Airport Actions Chapter 7, indicates that Section 4(f) of the Department of Transportation (DOT) Act is currently codified as 49 USC Section 303(c). Requirements from Section 4(f) indicates that, “subject to exceptions for de minimis impacts, the Secretary may approve a transportation program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land of an historic site of national, state, or local significance as determined by the official having jurisdiction thereof unless there is no feasible and prudent alternative to the use of such land and such program or project includes all possible planning to minimize harm resulting from the use.”

The following resources were reviewed to determine the presence of Section 303/4(f) lands within the project area:

- 1) The National Wilderness Preservation System website (www.wilderness.net)
 - No wilderness areas close to airport
- 2) USFWS America’s National Wildlife Refuge System website (www.fws.gov/refuges)
 - No refuges near airport
- 3) National Park Service website (www.nps.gov/findpark)
 - 0 parks within 10 miles of airport; 4 within 15 miles of airport
- 4) United States Department of Agriculture Forest Service National Forests Website (www.fs.fed.us)
 - No national forests near airport
- 5) Virginia Department of Conservation and Recreation
 - York River State Park, 11 miles west of Williamsburg
- 6) United States Geological Survey 7.5’ Hog Island Quadrangle via topozone website (www.topozone.com)
 - Swamps and woodlands
- 7) Virginia Department of Historic Resources (www.dhr.virginia.gov)



There are no wilderness areas, wildlife refuges, national forests, public parks, or state parks within or immediately adjacent to the airport property. Correspondence was faxed on February 28, 2008 to the Virginia Department of Historic Resources (VA DHR) requesting an archives search for previously recorded archaeological sites and architectural structures and districts within and adjacent to the airport. In a letter dated March 10, 2008 VA DHR provided a map (reference Figure 7) that identifies previously recorded archaeological and architectural resources within a $\frac{3}{4}$ mile radius of the airport. VA DHR records indicate that the airport property does not contain previously identified sites.

Areas protected under Section 4(f) would not be impacted as a result of this feasibility study as there have not been specific planned projects identified. Future projects may require additional coordination with VA DHR concerning prehistoric and historic resources under Section 106 of the National Historic Preservation Act of 1966 and Section 4(f).

→ **Endangered Species**

In order to meet the requirements listed in Chapter 8 of the FAA Environmental Desk Reference for Airport Actions, coordination with agencies having jurisdiction over federally listed threatened or endangered species must occur. On February 3, 2008 correspondence letters were submitted to Virginia Department of Conservation and Recreation (VA DCR) and the Virginia Department of Game and Inland Fisheries (VA DGIF) to determine if any threatened or endangered species are known to be present within the airport property.

A letter dated March 27, 2008 was received from the VA DCR indicating that Mountain camellia (*Stewartia ovata*) has a historical occurrence within the project vicinity. Mountain camellia is a shrub of the tea family and is uncommon through its range. It is considered rare in Virginia, currently existing in four locations and historically recorded in multiple locations. This shrub tends to grow on wooded bluffs and slopes with alkaline soils. VA DCR recommends a survey of the project area for this species. The VA DCR has entered into a memorandum of agreement with the Virginia Department of Agriculture and Consumer Services regarding state-listed plant and insect species. VA DCR indicates that the project will not affect state-listed plants or insects. They also state that State Natural Area Preserves are not present within the project area.

A letter dated April 23, 2008 was received from the VA DGIF indicating that the federal species of concern/state threatened species the bald eagle (*Haliaeetus leucocephalus*) has been recorded within 0.5 miles of the airport and the portion of College Creek adjacent to the airport is designated as a Confirmed Anadromous Fish Use Area, as well as the portion of James River to which it is a tributary to.



The VA DGIG also gathers information through the Virginia Department of Agriculture and Consumer Services (VA DACS). The VA DACS database indicates that the federal threatened/ state endangered small whorled pogonia (*Isotria medeoloides*) has been documented within 2 miles of the airport.

Impacts to endangered species is not anticipated given this feasibility study does not identify specific planned projects. A survey for Mountain camellia would be required for future projects proposing disturbance to the airport property. Further coordination with the VA DGIF, VA DACS and U.S. Fish and Wildlife Service concerning the bald eagle, anadromous fish species and the small whorled pogonia would be required for future airport projects.

→ **Floodplains**

Chapter 12 of the FAA Environmental Desk Reference for Airport Actions indicates that “to meet Executive Oder 11988, Floodplains, and the U.S. Department of Transportation Order 5650.2, Floodplain Management and Protection, all airport development actions must avoid the floodplain, if a practicable alternative exists.” If practicable alternatives do not exist, actions must be designed to minimize adverse impacts to natural and beneficial values of the floodplain, and to minimize potential risks to flood-related property loss and impacts on human safety, health, and welfare.

According to the Federal Emergency Management Act (FEMA) developed Flood Insurance Rate Map (FIRM) Panel 0205C, the Williamsburg-Jamestown Airport is located within Zone AE and Zone X designations (Figure 3). Zone AE is designated as being inside the 100 year floodplain. While Zone X is located outside the 100 year and 500 year floodplains. Although floodplains are present in the area, specific planned projects have not been identified as part of this feasibility study; therefore, there will be no impacts to existing floodplains. Future projects may require a floodplain analysis.

→ **Hazardous Materials**

In accordance with the FAA Environmental Desk Reference for Airport Actions Chapter 13 the use, storage, transfer, or dispersal of hazardous materials is regulated by federal, state, and local laws, which may extend to past and future landowners. It also states that disruption to these sites containing hazardous materials or contaminates may impact soils, surface water, groundwater, air quality, and the organisms using these resources.

A review of federal, state and local agency databases was conducted by Environmental Data Resources Inc (EDR) for the airport area. The EDR



Radius Map with GeoCheck® report, determined that the Williamsburg-Jamestown Airport property contains or contained underground storage tanks (UST) and aboveground storage tanks (AST). Three UST's, two of which contained AV gas and one which contained Jet fuel were indicated as being removed from the ground. Two ASTs containing AV gas were identified as being present. Disruption to hazardous materials will not occur, as a result of this feasibility study. Future projects may require an analysis of hazardous materials impacts.

- **Wetlands** (Note: potential wetlands will be identified through a review of National Wetland Institute maps only).

As stated in Chapter 21 of the FAA Environmental Desk Reference for Airport Actions, wetland delineations must be conducted for projects proposing earth disturbance in accordance with the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual to determine if wetlands are present through a wetland delineation. Executive Order 11990, Protection of Wetlands, and DOT Order 5660.1A, Preservation of Wetlands, requires that federal agencies avoid wetlands whenever practicable alternatives are possible.

The Virginia Coastal Zone Management Program and the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) were reviewed to identify mapped wetlands (Figures 4 and 5). According to this review the Williamsburg-Jamestown Airport is located within the Lower James Watershed. College Creek and a mix of palustrine wetlands are situated adjacent to airport property.

The mapped wetlands are identified as:

- Palustrine, forested, broad-leaved deciduous, seasonal-tidal (PFO1R)
- Palustrine, scrub-shrub, broad-leaved deciduous, temporarily flooded (PSS1A)
- Palustrine, unconsolidated bottom, permanently flooded, excavated (PUBHx)
- Palustrine, emergent, persistent, seasonal-tidal (PEM1R)
- Palustrine, emergent, persistent (PEM1N)
- Riverine, tidal, unconsolidated bottom, permanent-tidal (R1UBV);

Specific planned projects have not been identified as part of this feasibility study; therefore wetlands would not be affected. However, should future projects with ground disturbance occur, a wetland delineation would be required.

- **Noise** (Note: noise contours for the existing Airport will be developed using the latest version of the Integrated Noise Model [INM]).



Chapter 17 of the FAA Environmental Desk Reference for Airport Actions indicates that airport noise is often the most controversial environmental impact that the FAA examines. Many airport improvement and alteration projects have the potential to increase aircraft operations, which may promote noise impacts.

The Integrated Noise Model (INM) is the FAA's tool for detailed noise analysis. INM calculates day/night average sound levels (DNL) for noise, which are measured in decibels and based on the human ear's perception of noise throughout a 24-hour time period. The FAA has established the 65 DNL as the limit for acceptable noise, citing all day/night levels below 65 as within acceptable limits.

To establish a baseline, INM was used for this Study to create noise contours of the current aircraft activities. Runway information and aircraft operations were input into the model to create contours that depict existing noise patterns. The noise analysis was accomplished based on the 2007 estimated aircraft operations as presented in Chapter 2, *Aviation Forecasts*.

The noise patterns depicted in Figure 6 reveal the areas impacted by the 65 and 70 day/night average sound levels (DNL). The exhibit shows that the contours are entirely contained within airport property. No sensitive properties such as residences or businesses are impacted by the 65 or greater DNL.

111. PUBLIC PARTICIPATION

A. User Surveys

As a part of the overall public participation process, a series of User Survey forms were developed. The overall intent of these forms was to not only provide a mechanism to those who use the Airport to voice their opinions, but also to help develop a database for statistical analysis of operations and other planning issues.

There were three (3) separate survey forms:

- ➔ Based Aircraft User Survey
- ➔ Visitor Aircraft User Survey
- ➔ Renter Aircraft User Survey

Copies of the Based Aircraft User Survey forms were mailed to the owners of each of the aircraft based at JGG. As of March 1, 2008, forty-seven (47) responses were received. The following is a summary of the responses to questions asked in that survey.



- Average number of hours flown annually: 350
- Aircraft Usage:
 - 45% used their aircraft for business purposes to some degree
 - 82% used their aircraft for personal flying
 - 1% of their flying was for instruction
 - 45% of their flying was for proficiency purposes
- Average number of annual local operations: 160
- Average number of annual itinerant operations: 110
- If the Airport were to be closed:
 - Relocate to another airport: 29
 - Newport News
 - New Kent
 - Middle Peninsula
 - Other
 - Sell my aircraft: 9
 - Other: 5
- Experience any operating problems at JGG?
 - Yes: 6
 - No: 40

A Summary of the Based Aircraft User Survey may be found at Attachment 1-C

Copies of the Visitor Aircraft User Survey form were distributed by the Airport Owners to operators of aircraft that were visiting JGG. As of March 1, 2008, 65 forms were completed.

The following is a summary of the results of that survey.

- The reason for flying to JGG:
 - Business: 10
 - Personal: 39
 - Vacation: 3
 - Instruction: 4
 - Military: 3
 - Air taxi-cargo: 1
 - Air taxi-passenger: 1
 - Proficiency: 5
 - Other: 10
- Average number of persons on board the aircraft: 2.26
- Average number of times JGG used by respondents annually: 18
- If JGG were to be closed, you would:
 - Fly to another airport: 18
 - Drive (as opposed to flying): 2
 - Not come here at all: 33
- Experience any operating problems at JGG:
 - Yes: 7
 - No: 43



There were three (3) responses to the Renter Pilot User Survey. A summary of those responses may be found at Attachment 1-C

B. Community Airport Committee

A 6-member Community Airport Committee (CAC) has been established by James City County. A series of CAC meetings will be held throughout the development of the Airport Feasibility Study. A Public Workshop will also be held to offer the public an opportunity to meet with the planners, the CAC, and other community leaders to discuss various aspects of the Study. A summary of each of these meetings may be found at Attachment 1-D.

C. Web Page

Information relative to the Airport Feasibility Study may be found on the County's website at <http://www.james-city.va.us/government/airport-study.html>