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U.S. Department of Transportation  
Federal Aviation Administration

In Cooperation with the:

U.S. Army Corps of Engineers

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**New Runways, Terminal Facilities and Related Facilities at  
Washington Dulles International Airport**

Washington Dulles International Airport  
Dulles, Virginia

# Record of Decision



October 14, 2005

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## TABLE OF CONTENTS

| <b><u>Section</u></b>                                                    | <b><u>Page</u></b> |
|--------------------------------------------------------------------------|--------------------|
| I. Introduction .....                                                    | 1                  |
| II. Background .....                                                     | 5                  |
| III. Federal Actions Requested to Support the Preferred Alternative..... | 6                  |
| IV. Project Purpose and Need.....                                        | 8                  |
| V. Alternatives Analysis.....                                            | 13                 |
| VI. The Selected Alternative .....                                       | 18                 |
| VII. Public Involvement.....                                             | 20                 |
| VIII. Environmental Impacts .....                                        | 22                 |
| IX. Mitigation Summary .....                                             | 33                 |
| X. Agency Findings.....                                                  | 33                 |
| XI. Decision and Order .....                                             | 41                 |
| <br>                                                                     |                    |
| Figure 1 Proposed Project.....                                           | 3                  |
| <br>                                                                     |                    |
| Appendix A FEIS Comment Letters and Responses                            |                    |
| Appendix B Section 106 Memorandum of Agreement                           |                    |
| Appendix C Summary of Mitigation Program                                 |                    |

## I. INTRODUCTION

This Record of Decision (ROD) announces final agency determinations and approvals for those Federal actions requested of the Federal Aviation Administration (FAA) by the Metropolitan Washington Airports Authority (MWAA), the Airport Sponsor. These actions are necessary to support the proposed construction and operation of a new parallel north-south runway to the west of the airport, approximately 9,400 feet long by 150 feet wide, and a new parallel east-west runway to the south of the airport, approximately 10,500 feet long by 150 feet wide at Washington Dulles International Airport (IAD). The proposed project also includes associated taxiways, navigational aids (NAVAIDS), construction of the Tier 3 Concourse, and extension of the Automated People Mover (APM) System from the Tier 2 terminal to the Tier 3 terminal in accordance with the FAA's 1985 Master Plan.

The Federal Actions are considered in ROD Section III. This ROD completes a thorough and careful environmental and decision making process, including FAA's public disclosure and review by the FAA decision maker of the analyses and impacts described in the August 11, 2005 Final Environmental Impact Statement (FEIS).

This ROD has been prepared and issued by FAA in compliance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. Section 4321 *et. seq.*), the implementing regulations of the Council on Environmental Quality (CEQ) (40 C.F.R. Parts 1500-1508), and by using FAA Orders 1050.1E and 5050.4A as guidance. This ROD documents FAA compliance with several procedural and substantive requirements of aeronautical, environmental, programmatic, and related statutes and regulations that apply to FAA's decision and actions on proposed runway development and airport expansion projects.

FAA arrived at these determinations and approvals by reviewing the environmental analysis in the FEIS and all other relevant documents that comprise the Administrative Record. The FEIS discloses and evaluates all reasonably foreseeable actions; it does not present or analyze purely hypothetical or speculative situations.

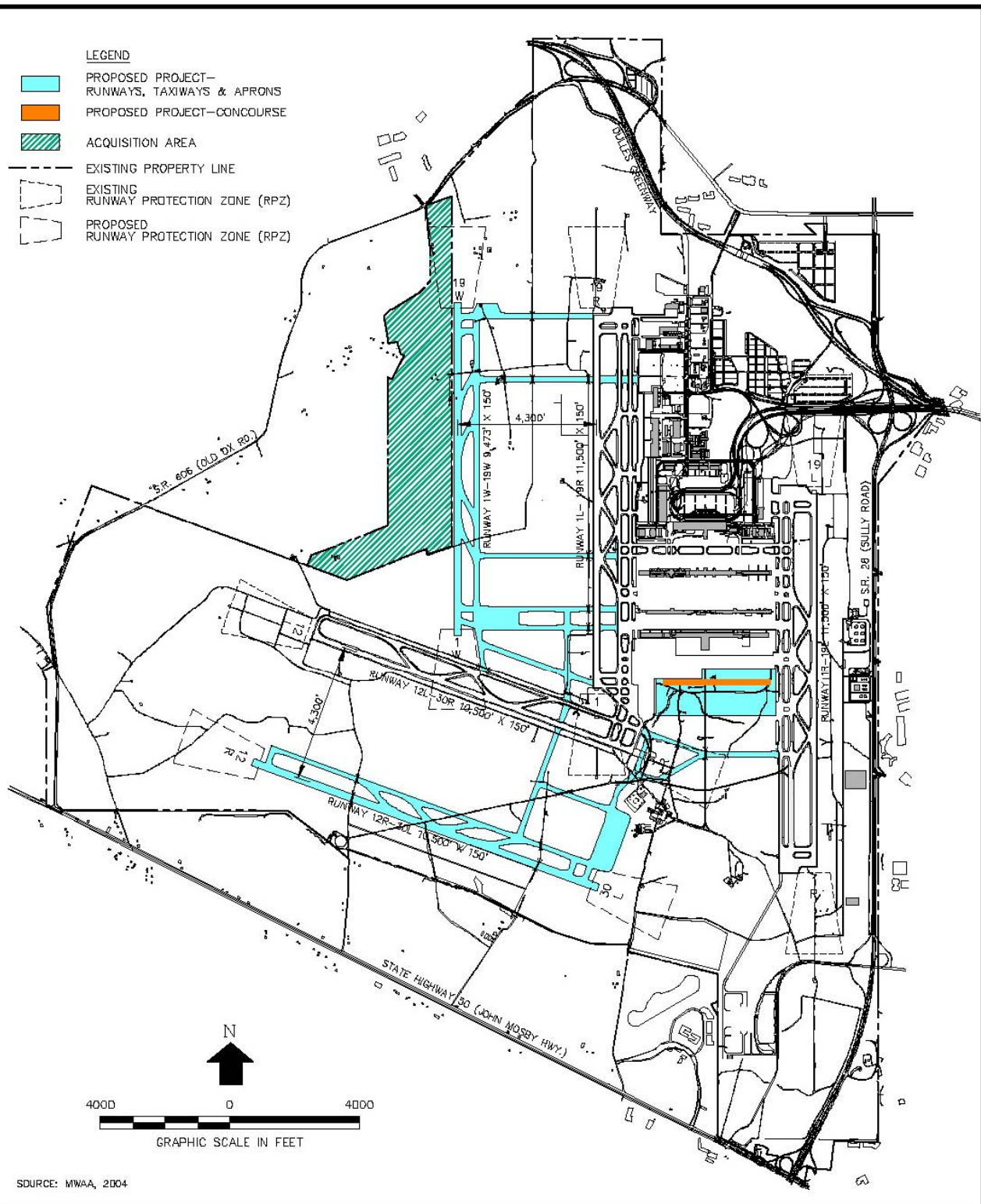
***DESCRIPTION OF MWAA'S PROPOSED ACTION***

The proposed project includes the following airport development projects depicted on **Figure 1**. Portions of the 2004 revised Airport Layout Plan (ALP) not previously approved that do not relate to this project and not described here are not herein approved.

Construction is anticipated to occur between the years 2006 and 2010 with the improvements expected to be fully operational in the year 2010.

1. Construction of a new north-south oriented runway (1W/19W) approximately 9,400 feet long located 4,300 feet west of existing Runway 1L/19R;
2. Construction of a new 10,500-foot east-west oriented runway (12R/30L) located 4,300 feet south of existing Runway 12/30;
3. Acquisition of 448 acres of property on the west side of the airport to accommodate Federal Aviation Regulations (FAR) Part 77 clearance surfaces, a Runway Protection Zone (RPZ), and buffer area;
4. Construction and operation of a new full-length parallel taxiway on the east side of new Runway 1W/19W;
5. Construction and operation of taxiway connectors between new Runway 1W/19W and existing Runway 1L/19R;
6. Construction and operation of a new full-length parallel taxiway on the north side of new Runway 12R/30L;
7. Construction and operation of taxiway connectors between new Runway 12R/30L and existing Runway 12/30;
8. Construction and operation of crossfield taxiways between existing Runway 30 and Taxiway "J5";

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Washington Dulles International Airport  
Environmental Impact Statement  
Record of Decision

**PROPOSED PROJECT**

**FIGURE 1**

9. Installation and operation of NAVAIDS for new Runways 1W/19W and 12R/30L localizer antennas, glide slope antennas, Precision Approach Path Indicators (PAPI), runway visual range (RVR) equipment, Inner Marker (IM), Far Field Monitor (FFM), High Intensity Approach Lighting System with Sequenced Flashers (ALSF-2), and Touchdown Zone Lighting (TDZL);
10. Construction of Tier 3 Passenger Concourse;
11. Construction and operation of the APM System from the Tier 2 Concourse to the Tier 3 Concourse;
12. Issuance of State Water Quality Section 401 certificate and U.S. Army Corps of Engineers (USACE) Section 404 wetland fill permit prior to start of construction and implementation of mitigation measures;
13. Changes to air traffic procedures;
14. Implementation of new air traffic procedures for the new runways;
15. Support facility improvements; and
16. Relocation of National Oceanic and Atmospheric Administration (NOAA)/National Weather Service (NWS) Sterling facilities, including the Weather Surveillance Radar (WSR-88D), the Upper Air Inflation Building (UAIB), National Data Buoy Center (NDBC) Test Bed facilities, and the Weather Forecast Office (WFO). NOAA is in the process of preparing separate NEPA documentation from this FAA EIS that will contain an evaluation of NOAA/NWS facility relocation alternatives, a detailed analysis of environmental impacts, selection of a Preferred Alternative, and description of mitigation measures. FAA and NOAA/NWS are coordinating their respective decisions regarding any required property transfer to MWAA and relocation of NOAA/NWS facilities. As of the publication of the FEIS, the NOAA/NWS Extended Site Survey (ESS) was underway. The preliminary survey identified six potential on-site and off-site relocation sites. The six sites evaluated may accommodate all or part of the facilities to be relocated. In addition, two sites have been identified as possible sites for the relocation of the Next Generation Weather

Radar (NEXRAD) only. All of the identified sites are in Loudoun County within 16 miles of the existing NOAA/NWS facility. The selection of a Preferred Alternative and the ultimate relocation decision is entirely up to NOAA/NWS and is based on their independent selection criteria.

NOAA/NWS anticipates completing the Final ESS in October 2005, with the Draft Environmental Assessment (EA) following shortly thereafter in November 2005, and the Final EA expected in March 2006.

Although future projects other than these are depicted on the conditionally approved ALP, MWAA has requested final environmental approval for only the projects described above. Projects that were not analyzed in the August 11, 2005 FEIS and were not subject to decision in this ROD will require additional environmental analysis if and when the sponsor proposes them for implementation to FAA.

The USACE was invited by FAA to participate as a cooperating agency for the FEIS, because MWAA is proposing several projects in its development program that would impact Waters of the United States. The USACE will evaluate the FAA's FEIS and issue its own ROD, in compliance with NEPA regulations.

## **II. BACKGROUND**

Operation of IAD and Ronald Reagan Washington National Airport (DCA) was transferred to MWAA from FAA in a lease agreement that became effective on June 7, 1987. Initially, the lease was for 50 years; however, it was recently extended to the year 2067. Consistent with the Federal legislation that authorized the lease (Title 49, Section 49104), MWAA agreed to:

“...assume responsibility for the Federal Aviation Administration's Master Plans for the Metropolitan Washington Airports,” 49 U.S.C. 49104(6)(A).

The most recent Master Plan for IAD (completed by FAA in 1985) details a preferred development plan of a five-runway system, which includes three north-south parallel runways and a parallel east-west runway system.

In 2002, IAD served more than 45,000 passengers per day and nearly 17 million passengers per year on 34 passenger airlines. The airlines serving IAD currently offer non-stop service to 72 cities in the U.S. and direct service to 28 international locations. In addition to passenger airlines, IAD serves four cargo carriers, a number of charter operators, and the general aviation community. IAD has emerged as one of the fastest growing airports in the world and a major East Coast gateway for domestic and international travelers as well as cargo activities (MWAA Internet Site, September 21, 2004).

IAD is designated as a large hub primary commercial service airport in FAA's *National Plan of Integrated Airport Systems* (NPIAS). In addition to IAD's vital role in the national system of airports, it serves as the "growth" airport in the metropolitan Washington region, since growth at DCA is limited by Federal legislation and surrounding land uses.

FAA is charged with the implementation of Federal policies under its statutory authorities. It is within the framework of NEPA, National Policy, and the Airport and Airway Improvement Act, as amended, that FAA is responding to MWAA's proposal for airport improvement. The following National Policy in 49 U.S.C. 47101(a) relates specifically to the proposed improvements at IAD:

- (7) That airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic be undertaken to the maximum feasible extent so that safety and efficiency increase and delays decrease.

The delay-reducing airfield improvements proposed at IAD are consistent with the above-referenced public policy objective.

### **III. FEDERAL ACTIONS REQUESTED TO SUPPORT THE PREFERRED ALTERNATIVE**

The Airport Sponsor (MWAA) has requested certain Federal actions to be taken to support the Preferred Alternative, which is designated in the FEIS as Build Alternative 3 (see FEIS Section 3.7 and FEIS Figure 3.3.2-4). The Federal actions requested of FAA to support the Preferred Alternative include:



- a. Determination of project eligibility for Federal grant-in-aid funds (49 U.S.C. 47101, *et. seq.*) and Passenger Facility Charge (PFC) funds (49 U.S.C. 40117), for land acquisition and relocation (49 CFR Part 24), site preparation, runway, taxiway, runway safety area, and other airfield construction, terminal and related landside development, navigational and landing aids, and environmental mitigation.
- b. Conclusions regarding air quality conformance of the proposed facility with applicable air quality standards under the Clean Air Act, as amended (42 U.S.C. 7506 and 176(c)(1)) and 40 CFR Part 93.
- c. Decisions to develop air traffic control and airspace management procedures to effect the safe and efficient movement of air traffic to and from the proposed new runways (49 U.S.C. 40103(b)).
- d. Determinations, through the aeronautical study process, under 14 CFR Part 77, regarding obstructions to navigable airspace (49 U.S.C. 40103(b) and 40113).
- e. Determinations under 14 CFR Part 157 as to whether or not the agency objects to the airport development proposal from an airspace perspective, based upon aeronautical studies (49 U.S.C. 40113(a)).
- f. Determinations under the 49 U.S.C. 47106 and 47107 pertaining to FAA funding of airport development including approval of a revised ALP, 49 U.S.C. 47107(a)(16),
- g. Environmental approval (see 42 U.S.C. 4321-4347, and 40 CFR Parts 1500-1508) and approvals under various executive orders discussed in the ROD.
- h. A certification that the proposed facility is reasonably necessary for use in air commerce or for the national defense (see 49 U.S.C. 44502(b)).

Other than the FAA actions approved in Section XI of this ROD, separate USACE and other Federal or state actions and associated determinations will be made by the appropriate agencies in accordance with established procedures. Several Federal permits would be required to implement the proposed project. The USACE is responsible for permitting processes under Section 404 of the Clean Water Act (CWA).

The Commonwealth of Virginia is responsible for permitting processes under 33 U.S.C. 1342, the Federal statute which governs the National Pollutant Discharge Elimination System (NPDES) permit program for stormwater and wastewater discharges.

Section 401 (State Water Quality Certification) requires certification by the state that the prospective Federal permitted project complies with the state's applicable effluent limitations and water quality standards. No Federal permit (Section 404 permit) is issued until such certification is obtained. Section 401 Certification applies to Federal permits issued under the CWA. The VDEQ is responsible for Section 401 Certification, called the Virginia Water Protection permit.

Through the Joint Permit Application (JPA) process, applications filed with the Virginia Marine Resources Commission are forwarded to the USACE and VDEQ as appropriate. Each agency makes its own regulatory decision based on the JPA.

MWAA is responsible for and will obtain all necessary Section 404 permits and Section 401 Water Quality Certifications prior to the start of construction activities.

#### **IV. PROJECT PURPOSE AND NEED**

The purpose of the project, from the Federal perspective, is to support the development of IAD such that it will safely accommodate the projected future aviation activity demand levels, without that aviation activity incurring unacceptable levels of aircraft operational delay, thereby causing resultant delays throughout the National Airspace System.

As the number of operations at the airport increase, the existing taxiway and runway system at IAD will become more congested, and aircraft will have to wait to land, delay their push-back from the gate area, or experience long taxi-queues and delays between the gate area and the departure end of the runways.

In the case of IAD, the proposed runway improvements are planned to reduce operational delay levels for both the short- and long-term, and make operations at IAD more efficient. Based on FAA planning guidelines, the greatest operational benefits are realized when new runways are built.

Because of the number of aircraft operations projected to occur at IAD in the future, FAA has determined that for the short-term, both the north-south and east-west runway systems at IAD need to have the ability to conduct dual simultaneous operations (i.e., the ability to land/depart two aircraft at the same time). Furthermore, FAA has determined that for the long-term, the north-south runway system, which is the runway system used most of the time at IAD, needs to be able to handle triple simultaneous operations (i.e., land/depart three aircraft at the same time) during all weather conditions.

***ALLOW IAD TO SAFELY AND EFFICIENTLY ACCOMMODATE FUTURE ACTIVITY WITHOUT INCURRING UNACCEPTABLE AIRCRAFT OPERATIONAL DELAY***

According to FAA's NPIAS (2001-2005), submitted to Congress on August 28, 2002:

“An airport is considered to be congested when average delay exceeds 5 minutes per operation. Beyond this point delays are extremely volatile, and a small increase in traffic, adverse weather conditions, or other disruptions can result in lengthy delays that upset flight schedules and impose a heavy workload on the air traffic control system.”

The NPIAS included IAD as one of the 18 airports nationwide with an estimated average delay in excess of 5 minutes per operation that accounted for most of the severe air traffic delays in the U.S. during 2000.

By 2010, IAD is forecast to serve approximately 30 million passengers and approximately 568,000 aircraft operations. With its existing three-runway configuration, aircraft operating at IAD are projected to experience 6.9 minutes of average delay per operation in 2010 (HNTB Corporation, November 2003).

Increases in airfield capacity to accommodate forecasted aviation demand should be coupled with improvements to passenger terminal and aircraft gate capacity. This would enable the airport system, as a whole, to accommodate the forecasted aviation demand in 2010 and beyond.

## **ANNUAL SERVICE VOLUME CALCULATIONS**

FAA's Advisory Circular (AC) 5090.3C, *Field Formulation of the National Plan of Integrated Airport Systems, Table 3-2*, specifies that when an airport's annual operations (arrivals and departures) approach 100 percent ASV, the construction of additional airfield enhancement projects should be underway. In addition, the airport sponsor should initiate planning studies to evaluate means of increasing airfield capacity when annual operations approach 60 to 75 percent of the calculated ASV.

In 2002, the demand level at IAD reached 73 percent of IAD's calculated ASV. By 2010, the demand level would be at 117 percent of its calculated ASV for the existing configuration, 98 percent of its calculated ASV for the four-runway scenario with an additional east-west parallel runway, and 95 percent of the ASV for the four-runway scenario with an additional north-south parallel runway. The greatest ASV would be achieved with a five-runway system at IAD (3 parallel north-south runways and 2 parallel east-west runways), which would result in a demand level of 76 percent of ASV in the year 2010.

The ASV calculations demonstrate the need for both of the proposed runway improvements at IAD by 2010, since the three-runway (existing) and four-runway configurations would reach or exceed 100 percent of the ASV in that time period. Historically, the ASV of the existing runway configuration was approached in the peak historical years of 1999 and 2000 (467,227 and 456,436 annual operations, respectively). Collectively, the addition of a new parallel north-south and east-west runway would provide adequate capacity, in terms of ASV, to safely and efficiently accommodate aviation demand within the study timeframe.

### ***NEED FOR A PARALLEL NORTH-SOUTH TRANSPORT CATEGORY RUNWAY IMMEDIATELY CAPABLE OF DUAL SIMULTANEOUS INDEPENDENT OPERATIONS DURING INSTRUMENT METEOROLOGICAL CONDITIONS (IMC) WHILE RESERVING THE CAPABILITY OF TRIPLE SIMULTANEOUS INDEPENDENT OPERATIONS DURING IMC IN THE FUTURE***

The average delay per operation (determined by SIMMOD) of the existing runway configuration in 2010 would be 6.9 minutes. The addition of a north-south parallel runway to the existing three-runway configuration at IAD would reduce the weighted average delay per operation by 32 percent, to 4.7 minutes. Delay cost benefits of the new north-south runway (operational in 2008) would total over \$36 million (based on year 2000 prices) through 2010 (HNTB Corporation, April 2003).

Based on FAA analysis, the maximum hourly IFR (used during IMC) arrival rate for dependent (close-in) parallel north-south runways in IMC, would be 70 arrivals per hour. However, the maximum hourly IFR arrival rate of three independent (widely spaced, minimum of 4,300 feet with high-update radar/monitoring equipment) north-south parallel runways at IAD, which would provide the ability to conduct triple simultaneous independent approaches in IMC, would be 105 arrivals per hour. The ability to accommodate an additional 35 aircraft per hour during IMC conditions would significantly enhance the operational capabilities of the airport and result in decreased delays per operation and overall more efficient handling of aircraft.

***NEED FOR A PARALLEL EAST-WEST TRANSPORT CATEGORY RUNWAY CAPABLE OF DUAL SIMULTANEOUS INDEPENDENT OPERATIONS DURING IMC***

An additional east-west parallel runway at IAD with a separation distance of at least 4,300 feet would result in significant operational benefits during Northwest Flow conditions, during which time strong crosswind conditions occur and IAD is limited to operations on Runway 12/30. Northwest wind conditions and operating flow are rare at IAD (approximately 1 percent of all annual operations), however, the Northwest Flow accounts for a disproportionate amount of average delay per operation (17 percent) with the airport's existing configuration. In addition to delays at IAD, delays are felt system-wide when a large hub airport such as IAD is limited to one operational runway.

An additional east-west parallel runway would also reduce delay during other operational flows at IAD (i.e., 46 percent reduction during Mixed Flow, 27 percent reduction during North Flow, and an 83 percent reduction during Northwest Flow). Total average delay per operation would be reduced by 45 percent, to 3.8 minutes, with an additional east-west parallel runway.

***PROVIDE REDUNDANT RUNWAYS***

Currently, IAD has two widely spaced parallel north-south runways that are capable of providing dual independent simultaneous approaches during IMC. A new north-south runway, with adequate spacing and ILS, would immediately provide the ability for dual independent simultaneous approach capabilities in conjunction with the existing Runway 1L/19R. Therefore, the new runway would provide redundancy for

the existing north-south parallel runways to provide similar capabilities in the event of a runway closure of either of the existing north-south runways (due to rehabilitation/maintenance, repairs, aircraft rescue and fire fighting exercises, snow removal, etc.) and unforeseen emergencies (incidents), without hindering overall airport operations.

A new east-west runway, with adequate spacing and ILS, would not only provide the ability to perform dual independent simultaneous approaches during IMC but also provide redundancy for the existing east-west runway in the event of a runway closure and unforeseen emergencies. A critical need for redundancy exists when the airport operates with only one runway during the Northwest (12/30) Flow. A new east-west runway would allow IAD to remain open if a runway closure were to occur during the Northwest Flow configuration, alleviating delays at the airport and system-wide.

***PROVIDE ADEQUATE PASSENGER TERMINAL AND AIRCRAFT GATE CAPACITY TO ACCOMMODATE FORECASTED GROWTH IN AVIATION DEMAND (TIER 3 CONCOURSE)***

According to *Washington Dulles International Airport Updated Activity Forecasts and Simulation* (HNTB Corporation, November 2003, Page 8, Table 4), enplaned passengers are forecasted to increase from 8,515,498 in 2002 to 15,350,500 (approximately 30 million total passengers) in 2010 (an 80 percent increase).

Other concourse development planned at IAD during the project time period is the Tier 2 Concourse improvements. The Tier 2 Concourse is intended to replace the temporary Concourse C/D and enhance services currently provided by IAD (EA Engineering, *Final Environmental Assessment*, Page 1-8, August 2002). No additional gate capacity will be developed as a result of the Tier 2 Concourse improvements.

Development of the Tier 3 Concourse, consisting of a 40-gate, 468,000-square-foot building, would provide an increase of passenger terminal and aircraft gate capacity concurrent with an increase in airfield capacity, and would allow IAD to safely and efficiently accommodate future aviation activity. In

addition, aviation growth past the study timeframe could be managed more effectively with components of the airport system (including airfield and passenger terminals) operating with similar capacities

## **V. ALTERNATIVES ANALYSIS**

Various off-site and on-site alternatives were evaluated and compared for potential impacts, to determine whether there was an alternative superior to that proposed by the MWAA. In the development of the FEIS, FAA re-examined the recommendations of previous IAD planning studies and identified and independently evaluated numerous alternatives for further consideration.

### ***OFF-SITE ALTERNATIVES***

One category of alternatives that was considered early in the environmental evaluation process but was not retained for further consideration was the use of other modes of transportation. Other modes of transportation include the use of roadway, conventional rail, and high-speed rail as an alternative to the proposed project. As part of the FEIS, FAA determined that alternative modes of transportation do not provide a reasonable fit with the proposed project objectives. The proposed project objectives relate to capacity enhancement measures to accommodate existing and future aviation activity. Therefore, other modes of transportation were eliminated because they do not provide the same service as aviation and would not affect IAD's ability to safely and efficiently accommodate existing and future levels of aviation activity.

As part of the FEIS, FAA also evaluated the development of a new airport or "greenfield" site and expanding an existing general aviation airport as alternatives to the proposed project at IAD, however a detailed evaluation of "greenfield" sites was not conducted in any of the recent IAD planning studies. The results of FAA's analysis indicate that development of a new airport or an upgrade of an existing area general aviation airport to air carrier standards would not satisfy the purpose and need for the proposed project at IAD. While a new airport or an expansion and upgrade of an existing general aviation airport could be designed expressly for the Level 1 airfield configuration, the Level 2 criteria - including infrastructure and cost - would be prohibitive.

In addition, FAA reviewed existing air carrier airports in the metropolitan Washington area to see if they could accommodate the growth in aviation activity forecast at IAD. Growth in aviation at DCA is severely limited due to Federal legislation regarding number of commercial operations and trip length. Recently, security concerns have restricted general aviation activity at the airport. Also, the airfield at DCA could not accommodate many of the longer-haul aircraft that utilize IAD, and DCA is not able to expand due to legislative, environmental, safety, security, and infrastructure reasons. Chapter 3.0 of the FEIS contains more detail on this evaluation.

Review of Baltimore Washington International Airport (BWI) indicates that it does not and could not serve the same aviation service area as IAD, in particular the Northern Virginia area because of its distance from the IAD service area/user group population. Therefore, BWI was not considered a reasonable alternative to the development of IAD.

Because neither DCA nor BWI can serve the entire air service needs of the IAD area and because neither of these airports meets the Level 1 criteria, FAA determined that for the FEIS, they were not reasonable alternatives and, therefore, did not retain them for further consideration in the FEIS.

#### ***NO-ACTION ALTERNATIVE***

The No-Action Alternative would not include any of the needed runway development features or the Tier 3 Concourse development. The No-Action Alternative did not meet the purpose and need criteria. However, as required by NEPA, this alternative was retained for detailed environmental analysis under all NEPA environmental impact categories, for baseline comparative purposes, and to disclose potential direct and cumulative impacts if the project were not built.

#### ***ON-SITE ALTERNATIVES: PARALLEL RUNWAY ALTERNATIVES***

Absent any practical way to use other modes of transportation, use of another existing airport or development of a new airport, the only remaining alternatives were limited to improving or not improving the airfield and landside facilities at IAD.



There were a total of six airfield/landside alternatives evaluated in the FEIS that entailed some form of development at IAD. The evaluation of these varying airfield alternatives was conducted using a two-level evaluation process. The two levels were formulated to focus on the purpose and need for the proposed project and the reasonableness of the alternatives. As the alternatives evaluation process proceeded through the first level, the alternatives that did not meet the initial purpose and need criteria were eliminated from further evaluation.

On-site alternatives that were not retained through the Level 1 screening because they did not meet the purpose and need criteria are described below. See FEIS Section 3.3.3 for a detailed evaluation of these alternatives.

**Build Alternative 1:** This alternative concept consisted of the construction of a new north-south oriented runway (1W/19W), approximately 9,765 feet long, located 3,500 feet west of existing Runway 1L/19R. Also included in this alternative concept was construction of a new 10,500-foot east-west oriented runway (12R/30L), located 4,300 feet south of existing Runway 12/30, and development of the Tier 3 Concourse. This alternative was recommended in the 1985 *Master Plan Update* and 1990 *Capacity Plan* (see Section 1.2.5 of the FEIS). This alternative could be constructed entirely on existing airport property.

Build Alternative 1 only partially met the purpose and need criteria for the proposed project at IAD. Since Build Alternative 1 did not meet all of the Level 1 purpose and need criteria, it was not retained for further evaluation in the FEIS.

**Build Alternative 2:** Build Alternative 2 consisted of the construction of a new north-south oriented runway (1W/19W) approximately 9,580 feet long located 4,000 feet west of existing Runway 1L/19R, construction of a 10,500-foot east-west oriented runway (12R/30L) located 4,300 feet south of existing Runway 12/30, and development of the Tier 3 Concourse. This alternative was recommended by MWAA in the 2002 *Capacity Review and Alternatives for the Fourth and Fifth Runways* study (see Section 1.2.5 of the FEIS). This alternative would also require the relocation of NOAA/NWS facilities including the WSR-88D NEXRAD radar, the UAIB, NDBC Test Beds, and the WFO.

Build Alternative 2 only partially met the purpose and need criteria for the proposed project at IAD. Since Build Alternative 2 did not meet all of the Level 1 purpose and need criteria, it was not retained for further evaluation in the FEIS.

**Build Alternative 3:** This alternative consists of the construction of a new north-south oriented runway (1W/19W) approximately 9,400 feet long located 4,300 feet west of existing Runway 1L/19R, construction of a new 10,500-foot east-west oriented runway (12R/30L) located 4,300 feet south of existing Runway 12/30, and development of the Tier 3 Concourse. This alternative is the proposed project defined by MWAA and depicted in its most recent ALP submitted to FAA. This alternative requires the relocation of NOAA/NWS facilities including the WSR-88D NEXRAD radar, the UAIB, NDBC Test Bed facilities, and the WFO.

Build Alternative 3 meets all of the purpose and need criteria for the proposed project at IAD. Since Build Alternative 3 met all of the Level 1 purpose and need criteria, it was retained for further evaluation in the FEIS.

**Build Alternative 4:** Build Alternative 4 consists of the construction of a new north-south oriented runway (1W/19W) approximately 9,200 feet long located 5,000 feet west of existing Runway 1L/19R, construction of a new 10,500-foot east-west oriented runway (12R/30L) located 4,300 feet south of existing Runway 12/30, and development of the Tier 3 Concourse. As with Build Alternatives 2 and 3, this alternative requires the relocation of NOAA/NWS facilities including the WSR-88D NEXRAD radar, the UAIB, NDBC Test Beds, and the WFO.

Build Alternative 4 meets all of the purpose and need criteria for the proposed project at IAD. Since Build Alternative 4 met all of the Level 1 purpose and need criteria, it was retained for further evaluation in the FEIS.

**Build Alternative 5:** This alternative consisted of the construction of a new north-south oriented runway (1W/19W) approximately 9,400 feet long located 4,300 feet west of existing Runway 1L/19R and

development of the Tier 3 Concourse. This alternative did not include a new parallel east-west Runway 12R/30L. This alternative required the relocation of NOAA/NWS facilities including the WSR-88D NEXRAD radar, the UAIB, NDBC Test Beds, and the WFO.

Build Alternative 5 only partially met the purpose and need criteria for the proposed project at IAD. Since Build Alternative 5 did not meet all of the Level 1 purpose and need criteria, it was not retained for further evaluation in the FEIS.

**Build Alternative 6:** This alternative consisted of the construction of a new 10,500-foot east-west oriented runway (12R/30L) with a 4,300-foot separation to the south from the existing Runway 12/30 and development of the Tier 3 Concourse. This alternative did not include a new parallel north-south Runway 1W/19W. Build Alternative 6 could be constructed entirely on existing airport property and would not require the relocation of any NOAA/NWS facilities.

Build Alternative 6 only partially met the purpose and need criteria for the proposed project at IAD. Since Build Alternative 6 did not meet all of the Level 1 purpose and need criteria, it was not retained for further evaluation in the FEIS.

#### ***SUMMARY OF LEVEL 1 ALTERNATIVES SCREENING***

At the conclusion of the Level 1 alternatives screening process, only Build Alternatives 3 and 4 were found to fully meet the purpose and need screening criteria. These alternatives were carried forward to the Level 2 alternatives screening evaluation.

#### ***LEVEL 2 ALTERNATIVES SCREENING ANALYSIS***

The No-Action Alternative and Build Alternatives 3 and 4 were evaluated in the second level of analysis using the following criteria: impacts on existing infrastructure; property acquisition required; number of residential and business relocations; comparative cost considerations associated with infrastructure impacts, property acquisition, and induced relocations of residences and businesses; and potential environmental impacts.

## ***LEVEL 2 ALTERNATIVES SCREENING SUMMARY***

Both Build Alternative 3 and Build Alternative 4 would result in a similar magnitude of development impacts, with the exception of required property acquisition, where Build Alternative 3 requires 448 acres and Build Alternative 4 required 480 acres. Both Build Alternatives also resulted in a similar magnitude of environmental impacts associated with noise, wetlands, water quality, 100-year floodplains, biotic communities, and Section 106 Historic resources.

Because of the similarities of Build Alternatives 3 and 4 with regard to the Level 2 screening criteria, both Build Alternative 3 and Build Alternative 4 were retained for detailed evaluation in Chapter 5.0, Environmental Consequences, of the FEIS. Table 3.3.3-1 of the FEIS summarizes the alternatives screening criteria applied to all the alternatives. Table 3.4-1 of the FEIS provides a comparison of the No-Action Alternative and Build Alternatives 3 and 4 with regard to the purpose and need criteria, constructability, financial feasibility, and environmental impacts. These alternatives are also graphically depicted in Chapter 3.0 of the FEIS.

## **VI. THE SELECTED ALTERNATIVE**

### ***SPONSOR'S PREFERRED ALTERNATIVE***

MWAA has identified to FAA that the development of Build Alternative 3 is the proposed project and the Sponsor's Preferred Alternative.

### ***ENVIRONMENTALLY PREFERABLE ALTERNATIVE***

The environmentally preferable alternative is the alternative which best promotes the national environmental policies incorporated in Section 101 of NEPA. In general, this would be the alternative resulting in the least adverse impacts to the human environment and which best protects natural and cultural resources.

As discussed in the FEIS, out of all of the alternatives evaluated by the FAA during the EIS process, the No-Action Alternative, which involves no construction or development of facilities, would result in the least

environmental impact. Although it would not result in wetland or floodplain impacts, the No-Action Alternative would result in greater air pollutant emissions than Build Alternative 3 in both years 2010 and 2015, and more homes (30) located within the 65 DNL noise contour in the year 2025 when compared to both Build Alternatives 3 and 4 (25 homes). Although the No-Action Alternative results in fewer overall environmental impacts, it is not considered a reasonable alternative to the proposed project because it fails to meet the purpose and need for the proposed project at IAD as identified in Chapter 2.0 of the FEIS. Therefore, the No-Action Alternative was not selected by FAA as the Preferred Alternative for the proposed project at IAD.

#### ***FAA'S SELECTED ALTERNATIVE***

In selecting its Preferred Alternative, FAA considered the Airport Sponsor's preference and input from Federal, state and local agencies as well as the public, and also independently evaluated each of the retained alternatives. During FAA's review process, it became clear that of the two build alternatives that met the purpose and need for the project, Build Alternative 3 would result in the least overall environmental impacts.

For example, Build Alternative 3 would result in approximately 286.1 acres of wetland impacts, 39 acres of 100-year floodplain impacts, 3,485.6 acres of Biotic Community impacts, and 448 acres of land acquisition. In addition, Build Alternative 3 would result in two homes experiencing a significant noise impact in the year 2025, less than significant impacts associated with water quality, and air quality emissions would be less than both the No-Action Alternative and Build Alternative 4.

In comparison, Build Alternative 4 would result in 307.6 acres of wetland impacts, 35 acres of 100-year floodplain impacts, 3,658.7 acres of Biotic Community impacts, and the acquisition of 480 acres of land. Build Alternative 4 would result in two homes experiencing a significant noise impact in the year 2025 (the same two homes as impacted under Build Alternative 3), less than significant impacts associated with water quality and increased air quality emissions when compared to Build Alternative 3.

FAA has determined that both Build Alternatives 3 and 4 would directly impact fourteen archaeological sites. The Virginia SHPO concurred with FAA's determination that site 44FX2840, as well as sites 44LD538 (Historic Component), 44LD539 (Historic Component), and 44LD1042 (Historic Component) are eligible for listing in the National Register. The SHPO determined that the Prehistoric Component of site 44LD539 was ineligible for listing in the National Register. Both the FEIS Executive Summary and the FEIS document contain a table summarizing the comparison of alternatives (Table S-2 in the Executive Summary and Table 3.4-1 in the FEIS, Chapter 3.0).

Based on the comparison of environmental impacts, particularly with regard to air quality, biotic communities, the critical wetlands category, as well as financial feasibility and operational considerations, FAA selected Build Alternative 3 as its Preferred Alternative. The selection of Build Alternative 3 incorporates mitigation measures described in Section 6.3 of the FEIS and Appendix C of this ROD. As noted in the concluding sections of this ROD, the selection means that FAA may take the Federal actions required to support this alternative, subject to the approval standards for the required Agency actions discussed in ROD Section III above and ROD Sections X and XI below.

## **VII. PUBLIC INVOLVEMENT**

FAA and MWAA conducted extensive public involvement for the EIS process. This began in May 2002, when FAA published a Notice of Intent (NOI) to prepare an EIS and hold Scoping meetings for the proposed projects at IAD, and continued through several Public Information Workshops and the Public Hearings on the DEIS. For all meetings, a combination of newspaper advertisements, newsletters, postcards, e-mail alerts, and radio advertisements were used to notify the public of the upcoming workshops. The following table summarizes the public and agency involvement throughout the EIS process.

## SUMMARY OF PUBLIC AND AGENCY INVOLVEMENT

| Meeting / Event                                            | Date    | Location                                          | Attendance |
|------------------------------------------------------------|---------|---------------------------------------------------|------------|
| Agency Scoping Workshop                                    | 6/26/02 | Marriott Washington Dulles Airport                | 27         |
| Public Scoping Workshop                                    | 6/26/02 | Westfield High School, Fairfax County             | 78         |
| Public Scoping Workshop                                    | 6/27/02 | Farmwell Station Middle School,<br>Loudoun County | 42         |
| Public Workshop - Alternatives                             | 10/7/03 | Farmwell Station Middle School,<br>Loudoun County | 88         |
| Public Workshop - Alternatives                             | 10/8/03 | Westfield High School, Fairfax County             | 82         |
| Agency Workshop - Alternatives<br>and Affected Environment | 1/14/04 | Washington Dulles International Airport           | 22         |
| Agency Workshop - Wetlands<br>Mitigation                   | 1/14/04 | Washington Dulles International Airport           | 21         |
| Public Workshop - Environmental<br>Consequences            | 4/20/04 | Farmwell Station Middle School,<br>Loudoun County | 52         |
| Public Workshop - Environmental<br>Consequences            | 4/21/04 | Westfield High School, Fairfax County             | 81         |
| Public Hearing and Workshop                                | 2/22/05 | Farmwell Station Middle School,<br>Loudoun County | 72         |
| Public Hearing and Workshop                                | 2/23/05 | Ormond Stone Middle School, Fairfax<br>County     | 49         |

A total of 376 comment letters or speaker comments were submitted to FAA from Scoping through the DEIS review and comment period. Over 800 e-mails supporting the proposed project were also received by FAA. The consolidated comment database for all comments received during the EIS process is contained in Appendix L of the FEIS. FAA has responded to all reasonable comments received from the public and agencies. Summaries of the comments received and responses are contained in Appendix L-4 of the FEIS.

FAA carefully considered all comments received from the public as well as from Federal, state, and local agencies in preparing the FEIS. The FEIS addresses the topics and issues of public concern raised on the DEIS and reflects modifications to its text.

On August 19, 2005, FAA published a Notice of Availability of the FEIS in the *Federal Register*. FAA has received comments on the FEIS since August 19, 2005; those matters within its jurisdiction have been fully considered, and copies of the letters, summarized comments, and FAA's written responses are contained in Appendix A of this ROD.

To date, there has not been a high degree of public controversy concerning the implementation of the proposed project. The public concern that did occur was centered on the potential environmental impacts associated with the development of the two parallel runways at IAD, particularly with regard to noise, air quality, and quality of life issues. Agency concerns focused on impacts to wetlands and upland communities. These issues and concerns have been fully addressed by FAA in the FEIS.

## **VIII. ENVIRONMENTAL IMPACTS**

A detailed analysis of the potential environmental impacts resulting from the construction and operation of FAA's selected alternative was accomplished as part of the FEIS. Two main study periods were examined: 2002 for the baseline conditions and 2010 as the first operational year of the new runways. Due to agency comments received after publishing the DEIS and guidelines contained in 40 CFR Part 93.159(a) and (d)(2), for the FEIS, FAA also analyzed potential air quality impacts in 2015, which provided a reasonably foreseeable forecast of future operations past the year 2010 in which the total of direct and indirect emissions from the proposed project is expected to be greatest on an annual basis. In accordance with guidance provided in FAA Order 1050.1E, paragraph 14.4g, analyses of future noise conditions was prepared for the year of anticipated project implementation (2010) and 2025. The year 2025 was evaluated in order to compare current planning policies of Loudoun and Fairfax counties and to be consistent with long-term planning efforts by MWAA for IAD.

### ***NOISE IMPACTS***

FAA Orders 1050.1E and 5050.4A guidance establishes the Threshold of Significance for noise impacts to be a 1.5 Day-Night Average Sound Level (DNL) or greater increase in noise at any noise-sensitive areas within the 65 DNL contour (U.S. DOT, FAA, 1985, 2004). FAA Order 1050.1E considers that if an increase in the DNL of 1.5 dBA occurs at any noise-sensitive area within the 65 DNL contour, further analysis is warranted. To comply with FAA's guidance provided in 1050.1E and the recommendations of the 1992 Federal Interagency Committee on Noise (FICON), noise-sensitive areas between 60 and 65 DNL should be evaluated for increases of 3.0 DNL or greater if an increase of 1.5 DNL occurs at any noise-sensitive area within the 65 DNL. To comply with guidance provided in FAA Order 1050.1E, for



proposed air traffic actions above 3,000 feet above ground level (AGL), potential noise impacts resulting from changes in airport arrivals from 7,000 feet AGL and departures to 10,000 feet AGL should be disclosed. Noise-sensitive areas between 45 and 60 DNL should be evaluated for increases of 5.0 DNL or greater.

In 2010, off-airport acreage would consist of approximately 206 acres of non-noise-sensitive land within the 65 DNL contour for the Preferred Alternative. No residences in Loudoun or Fairfax counties and no noise-sensitive receptors would exceed the 1.5 DNL Threshold of Significance within the 65 DNL contour.

In 2025, off-airport aviation-related noise impacts are anticipated for the Preferred Alternative. Two single-family detached residences in Loudoun County would exceed the 1.5 DNL Threshold of Significance within the 65 DNL contour. No residences in Fairfax County and no noise-sensitive receptors in either Loudoun or Fairfax counties would exceed the 1.5 DNL Threshold of Significance within the 65 DNL contour. Since the Preferred Alternative would result in significant noise impacts to two residences in 2025, mitigation measures are warranted. MWAA has committed to a mitigation program for these two homes if the land is still in residential use prior to the opening of proposed Runway 12R/30L. Mitigation measures for Noise Impacts are discussed in Appendix C of this ROD.

#### ***LAND USE IMPACTS***

The Preferred Alternative would not result in land use impacts. See Section 5.2 of the FEIS.

#### ***SOCIAL IMPACTS AND ENVIRONMENTAL JUSTICE***

The Preferred Alternative would not result in social or environmental justice impacts. See Section 5.3 of the FEIS.

#### ***INDUCED SOCIOECONOMIC IMPACTS***

The Preferred Alternative would not result in induced socioeconomic impacts. See Section 5.4 of the FEIS.

### ***AIR QUALITY IMPACTS***

The Preferred Alternative would result in a minor decrease in air pollutant emissions at IAD. See Section 5.5 of the FEIS.

### ***WATER QUALITY IMPACTS***

Both surface water and groundwater resources within the Cub Run and Broad Run sub-basins would be affected with the implementation of the Preferred Alternative. Water supply and wastewater treatment would also be impacted by this alternative.

Impacts to surface water quality could potentially occur from stormwater runoff during construction and operation of the new runways and facilities. As discussed in Section 4.3.3.1 of the FEIS, there is a topographic divide in the center of the IAD property, with the Broad Run sub-basin draining to the north and the Cub Run sub-basin draining to the south. Surface water impacts would be slightly greater in the Cub Run sub-basin than in the Broad Run sub-basin from the Preferred Alternative. The majority of disturbed area during construction and the greatest amount of added impervious area would occur in the Cub Run sub-basin under the Preferred Alternative. Stormwater runoff from areas cleared of vegetation during construction could result in temporary increases in turbidity within surface waters of both sub-basins. However, Best Management Practices (BMPs) will be implemented during construction to minimize erosion and sediment transport into surface waters. Some of the permanent BMPs implemented to minimize long-term impacts would include stormwater detention ponds, oil water separators, deicing storage tanks and spill prevention.

Groundwater recharge and discharge areas within the Broad Run and Cub Run sub-basins would be covered with additional impervious surfaces as a result of implementation of the Preferred Alternative. Groundwater recharge areas within both the Broad Run and Cub Run sub-basins would experience impacts from additional impervious surfaces; however, the specific impacts are localized and would not affect any major groundwater supplies.

Potable water and wastewater treatment demands are not expected to change with the Preferred Alternative. The forecasted increase in operations, with or without the additional runways, are expected to increase the number of passengers to approximately 30 million by 2010, which would increase the potable water demand to approximately 886 gallons per minute (gpm) (1.28 million gallons per day [mgd]). The forecasted number of enplanements in 2010 is 15,350,500 for each of the alternatives, which would increase the wastewater treatment demand to 510 million gallons annually (1.4 mgd). Mitigation measures for Water Quality Impacts are discussed in Appendix C of this ROD.

***DEPARTMENT OF TRANSPORTATION SECTION 4(f) AND DEPARTMENT OF INTERIOR SECTION 6(f) IMPACTS***

The Preferred Alternative would not result in DOT Section 4(f) or DOI Section 6(f) impacts. See Section 5.7 of the FEIS.

***HISTORIC AND ARCHAEOLOGICAL RESOURCES IMPACTS***

On the basis of the Area of Potential Effect (APE), it was determined that the Preferred Alternative would have no direct effects on either the Dulles Airport Historic District or Sully Plantation, and has the potential for one or more indirect effects on the Dulles Airport Historic District.

Fourteen archaeological sites that would be impacted by the Preferred Alternative were evaluated for their eligibility for listing in the NRHP. FAA and MWAA have determined that of these fourteen sites, only four sites are eligible for listing in the NRHP and will be adversely affected by the Preferred Alternative. In consultation with the SHPO an eligibility determination for these four sites was made, with the exception of Site 44LD539, for which it was determined that the Prehistoric Component of this site was ineligible for listing in the National Register. The remaining 10 sites have been determined to be ineligible for listing in the NRHP. For each of the eligible sites, Phase III Data Recovery and/or Preservation-In-Place will be undertaken in accordance with stipulations outlined in the project MOA, as contained in Appendix B of this ROD. Mitigation measures for Historic/Archaeological Resource Impacts are discussed in Appendix C of this ROD.

### ***BIOTIC COMMUNITIES IMPACTS***

Based on the analysis contained in the FEIS, the Preferred Alternative would impact 1,639 acres of natural upland communities, 286.1 acres of wetland communities and 1,598.1 acres of altered/disturbed vegetative communities. The following discussion applies to the impacts to natural upland vegetative communities. Wetland community impacts are address in the wetlands section.

In their comments on the DEIS, the U.S. Fish and Wildlife Service (USFWS) recommended that FAA prepare a Habitat Evaluation Procedure (HEP) analysis to further evaluate upland biotic community impacts, particularly with regard to potential impacts to upland habitat for migratory birds. FAA considered this comment and determined that a HEP analysis was not warranted. This determination was based on the consideration that MWAA had already undertaken comprehensive habitat characterization and wildlife surveys of both upland and wetland biotic communities throughout the IAD property as part of this EIS as well as for other NEPA documentation for other MWAA actions. The surveys go beyond the descriptive value of HEP; they not only describe habitat structure but also provide information on actual use by wildlife, including migratory species.

In the FEIS, FAA evaluated the upland forested areas at IAD that would be impacted by construction of the Preferred Alternative. This evaluation determined that the affected upland communities are the result of recent natural succession on IAD-owned property that was allowed to lay fallow during the past 50 or so years. When the IAD property was purchased, these areas were almost entirely open, actively cultivated farmland. This acreage was always intended to be used for airport expansion purposes; it has not been a long-term habitat for migratory species and there are extensive wildlife management practices currently in use to restrict wildlife attractants.

The FAA response to USFWS comments were sent to USFWS after the DEIS was published. This was followed by a teleconference to discuss the comments and responses thereto. USFWS did not object to the approach that was proposed for the FEIS. USFWS stated that they did not have a fundamental problem with the project but that mitigation was still of concern to them.

To further address this comment, additional information was submitted to USFWS as well as VDEQ as part of the JPA process. FAA believes that it has already quantified and thoroughly evaluated upland habitat types at IAD in these documents and has adequately addressed impacts in both the FEIS and JPA. A HEP analysis would not provide any substantial additional information than that provided in the survey documents. The data provided in the FEIS contains sufficient information to allow FAA to make an informed decision about the magnitude of the upland biotic community impacts and a selection of a Preferred Alternative.

USFWS referenced Executive Order 13186 *Responsibilities of Federal Agencies to Protect Migratory Birds* in their comments on the DEIS and the applicability of the Executive Order to upland impacts from the project. The USFWS recommended mitigation for the impacts. However, the Executive Order covers direct Federal actions. MWAA's proposed project is not a direct Federal action but FAA considered the comment. In terms of providing replacement habitat for the upland biotic community impacts, mitigation/replacement of impacted forested upland habitats is subject to a determination as to whether such replacement is reasonable and practicable. Recent land acquisition by MWAA completed in March 2005 of unimproved land west of the existing airport has indicated that costs of such land would not be practicable. It is unlikely that acquisition of sufficient acreage of land suitable for either creation or conservation of upland forests would be considered reasonable or practicable on the basis of cost and availability of land. As part of the design efforts for the Preferred Alternative, MWAA has strived to develop a configuration and specific engineering details that minimize upland community impacts. BMPs would be used to minimize impacts to upland biotic communities to the greatest extent practicable during construction. Development of the Preferred Alternative would comply with the provisions of Executive Order 13112, Invasive Species, February 3, 1999, to prevent, control, and minimize economic, ecological, and human health impacts from invasive species. In addition, as mentioned above, the proposed project by MWAA is considered an action carried out by a non-Federal entity with Federal assistance that is not subject to Executive Order 13186 (refer to the definition of "Action" in (h) of the Order). MWAA is aware that it is subject to the provisions of the Migratory Bird Treaty Act (MBTA) in regard to the "taking" of migratory birds.

Based on the information provided above, FAA has made the determination that upland biotic communities impacted by the Preferred Alternative did not require mitigation and further that the impacts could not be practicably mitigated.

#### ***THREATENED AND ENDANGERED SPECIES IMPACTS***

The Preferred Alternative would not result in Threatened and Endangered Species impacts. See Section 5.10 of the FEIS.

#### ***WETLAND IMPACTS***

The Preferred Alternative would result in unavoidable impacts to wetlands and streams located within and adjacent to the Limits of Disturbance (LOD). Direct impacts to wetlands and streams would result from activities such as clearing vegetation, altering hydrology, filling wetlands, and grading for construction activities. Indirect impacts would potentially result from alterations in hydrology, and the Preferred Alternative would directly and indirectly impact a total of 286.1 acres of jurisdictional wetlands, and 124,045 linear feet of streams. Refined design efforts by MWAA to minimize wetland and stream impacts have resulted in a reduction in impacts as a result of “fill” activities. The actual loss of wetlands and streams by fill for the Preferred Alternative is estimated to be 174.7 acres of wetlands and 60,858 linear feet of streams. The remainder of identified impacted wetlands and streams, which are not directly impacted by fill, would continue to remain in place. However, clearing of vegetation, routine mowing, and potential alterations of hydrology would result in a change of the dominant plant species and wetland functions and values. The Preferred Alternative is the most practicable alternative for the proposed project; therefore, impacts to wetlands and streams are unavoidable. The estimates of wetland and stream impacts and loss are preliminary and subject to revision through the CWA Section 401/404 permit process.

The MWAA has initiated Section 401/404 coordination with the Commonwealth of Virginia and the USACE to obtain the required certification and permit and implement a mitigation program for impacts to wetlands and streams associated with the Preferred Alternative. The USACE and the Commonwealth

are currently reviewing a JPA submitted by MWAA for the Preferred Alternative. Mitigation measures for Wetland Impacts are discussed in Appendix C of this ROD.

#### ***FLOODPLAIN IMPACTS***

A floodplain evaluation was conducted to determine the effect of the Preferred Alternative on 100-year floodplains. For the purposes of the FEIS, only floodplains established by the Federal Emergency Management Agency (FEMA) (those shown on the Flood Insurance Rate Maps [FIRMs]) were used to quantify impacts. The Preferred Alternative would result in new development within the 100-year floodplain, resulting in lost floodplain storage volume, and the FEIS Alternatives Analysis (Chapter 3.0) shows that no other practicable Build Alternative exists.

The total area of the 100-year floodplain encroached upon by the Preferred Alternative would be approximately 39 acres. For the Preferred Alternative, the encroachment would occur within the 100-year floodplains of Stallion Branch and its tributaries. This encroachment is considered non-significant encroachment with the implementation of mitigation measures and the public has been advised of the floodplain impacts through FAA's Public Involvement Program. Streams such as Cub Run and its tributaries would also be impacted by the Preferred Alternative, but these streams do not have FEMA established floodplains within the IAD property boundary. Mitigation measures for Floodplain Impacts are discussed in Appendix C of this ROD.

#### ***COASTAL ZONE MANAGEMENT PROGRAM AND COASTAL BARRIERS IMPACTS***

The Preferred Alternative would not result in Coastal Zone Management Program or Coastal Barrier impacts. See Section 5.13 of the FEIS. A Coastal Zone Consistency Determination has been received from the Commonwealth of Virginia.

#### ***WILD AND SCENIC RIVERS IMPACTS***

The Preferred Alternative would not result in Wild and Scenic River impacts. See Section 5.14 of the FEIS.

### ***FARMLAND IMPACTS***

The Preferred Alternative would not result in Farmland impacts. See Section 5.15 of the FEIS.

### ***ENERGY SUPPLY AND NATURAL RESOURCE IMPACTS***

The Preferred Alternative would not result in Energy Supply or Natural Resource impacts. See Section 5.16 of the FEIS.

### ***LIGHT EMISSION IMPACTS***

The Preferred Alternative would not result in Light Emission impacts. See Section 5.17 of the FEIS.

### ***SOLID WASTE IMPACTS***

The Preferred Alternative would not result in Solid Waste impacts. See Section 5.18 of the FEIS.

### ***CONSTRUCTION IMPACTS***

Increased emissions and noise from construction vehicles, water quality impacts, and increased municipal solid waste (MSW) are expected as a result of constructing the Preferred Alternative. These impacts would be temporary and would be minimized through the establishment and use of environmental controls such as BMPs and Federal, state, and local construction mitigation guidelines. Soil erosion and sedimentation control would also be required for the Preferred Alternative. See Section 5.19 of the FEIS.

All on-airport construction activities would adhere to FAA AC 150/5370-10A, *Standards for Specifying Construction of Airports* and FAA AC 150/5370-7, *Controls to Prevent Air and Water Pollution*. Mitigation measures for Construction Impacts are discussed in Appendix C of this ROD.

### ***HAZARDOUS SUBSTANCES AND ENVIRONMENTAL CONTAMINATION IMPACTS***

The Preferred Alternative would not result in Hazardous Substance or Environmental Contamination impacts. See Section 5.20 of the FEIS.



## ***SURFACE TRANSPORTATION***

The Preferred Alternative would not result in Surface Transportation impacts. See Section 5.21 of the FEIS.

## ***OTHER CONSIDERATIONS***

### **Consistency with Plans, Goals, and Policies**

The Preferred Alternative does not conflict with the objectives of Federal, regional, state, or local land use plans, policies, or controls for the Dulles area. This alternative is reasonably consistent with the most recently published MWA planning goals and objectives for IAD including the 1985 Master Plan Update, the 1990 *Capacity Plan*, the 2002 *Capacity Review and Alternatives for the Fourth and Fifth Runways*, the 2003 *Updated Activity Forecasts and Simulation*, and the 2004 ALP. In addition, both Fairfax and Loudoun counties support the expansion of IAD as reported in their respective Comprehensive Land Use Plans. On a regional level, the Preferred Alternative is consistent with the FAA's Eastern Region Airports Division Plan, as well as with the Metropolitan Washington Council of Governments' (MWCOG) Transportation Planning Board document titled, *2000 Update to the Fiscally Constrained Long-Range Transportation Plan for the National Capital Region*, approved in May 2002.

### **Degree of Controversy**

To date, there has not been a high degree of controversy concerning the implementation of the proposed project. Reviewing agencies submitted comments and requests for additional analysis regarding wetland mitigation plans, air quality analysis, and uplands mitigation. The additional analysis was completed by FAA and the comments were responded to by FAA in the FEIS. In addition, questions raised by the public as part of the Public Involvement process on the potential environmental impacts associated with the development of the runways, particularly with regard to noise, air quality, and water quality issues have also been address by FAA in the FEIS. A summarization of comments received during scoping as well as a copy of all comment letters and meeting transcripts received during the EIS process are contained in Appendix K and L of the FEIS.

### **Design, Art, Architecture**

FAA guidelines (1050.1E and 5050.4A) state that design factors should be employed that would complement and support establishment of functional, efficient, and safe airport facilities while reflecting local, cultural, and architectural heritage considerations. The proposed project at IAD will be designed in accordance with state building codes and FAA requirements, respectively, as stipulated in the project specific MOA contained in Appendix B of this ROD. Although no specific design plans are currently available, the MWAA will encourage the proposed Tier 3 Terminal facility to be designed in a manner that is compatible with the existing airport environs, including the Dulles Airport Historic District.

### ***CUMULATIVE IMPACTS***

The FEIS was specifically designed to meet CEQ requirements regarding cumulative impacts. The FEIS considered, to the extent reasonable and practical, the possible impacts of the proposed project and other developments on- and off- airport that are related in terms of time or proximity. A complete listing of the projects evaluated on a cumulative basis is included in Section 5.23 of the FEIS.

A thorough environmental evaluation of the on airport projects indicated that cumulative impacts would be minimal. See Section 5.23 of the FEIS. No significant impacts to cultural resources, Section 4(f) properties, biotic communities, endangered species, or floodplains would occur with the implementation of these projects. These projects would result in impacts to a total of 26 acres of wetlands. MWAA has already developed a mitigation program for these impacts and obtained the required permits from the USACE and VDEQ.

Environmental evaluation of the off-airport projects has not been completed yet by the sponsoring entities; therefore, impacts cannot be quantified at this time. However, based on the urban setting of these projects, cumulative impacts to cultural resources, Section 4(f) properties, biotic communities, endangered species, floodplains, and wetlands are anticipated to be minimal. The Metrorail project environmental evaluation has been completed. This project is anticipated to result in impacts to 5 acres of wetlands. Environmental impacts associated with the relocation of NOAA/NWS facilities are currently being evaluated by NOAA/NWS.

## **IX. MITIGATION SUMMARY**

The construction and operation of the Preferred Alternative will result in the use of resources and in unavoidable environmental impacts. FAA and MWAA have developed a comprehensive mitigation program that establishes measures to mitigate the adverse effects of construction and operation of the Preferred Alternative. The program will be implemented by the MWAA in conjunction with implementation of the Preferred Alternative. This mitigation program was developed to meet applicable Federal and state requirements and in consideration of state and local guidelines. The concerns and interests of the public and government agencies were also addressed. The mitigation program for the Preferred Alternative is described in detail in FEIS Section 6.3 and summarized in ROD Appendix C.

## **X. AGENCY FINDINGS**

Implementation of the Preferred Alternative would result in a reduction of aircraft delay to acceptable levels and provide for the safe and efficient use of the airport. The Preferred Alternative would also result in overall benefits to the National Airspace System.

FAA hereby makes the following determinations and approvals for this project, based on the appropriate information and data contained in the FEIS and the administrative record, and having considered: (1) the policies set forth at 49 U.S.C. 40104 and 47101; (2) the ability of the alternatives to meet the purpose and need; and (3) the Administrative Record which concerns these development projects.

These determinations and approvals do not signify an FAA commitment to provide a specific level of financial support for these projects. An actual funding commitment can only be made in the future, pending MWAA's grant application and FAA consideration of the separate funding criteria prescribed by 49 U.S.C. 47115(d) and 49 U.S.C. 40117.

**A. THE PROJECT IS CONSISTENT WITH EXISTING PLANS OF PUBLIC AGENCIES FOR DEVELOPMENT OF THE AREA SURROUNDING THE AIRPORT (49 U.S.C. 47106(a)(1)).**

The determination prescribed by this statutory provision is a precondition to agency approval of airport funding applications. Most of the proposed new runways and related improvements would be built on the existing airport property. These on-site improvements are under the jurisdiction of MWAA and not the local land use planning and zoning ordinances of Loudoun and Fairfax counties. MWAA, which exists independently of all other bodies, including the United States Government, the Commonwealth of Virginia, the District of Columbia, and Loudoun and Fairfax Counties, has been given the full responsibility for the operation, maintenance, protection, promotion, and development of IAD and DCA, including responsibility for financing and making capital improvements at both airports.

The proposed new runways are consistent with the original IAD Master Plan as well as the local governments' Comprehensive Plans and land use regulations. Both Fairfax and Loudoun counties have adopted comprehensive plan policies and land use controls to ensure that development patterns will be compatible with airport improvements as well as to mitigate the impact of these improvements to the surrounding area. The local governments are supportive of the proposed project and are striving to ensure consistency of local land use planning and zoning with the proposed airport improvements.

MWAA has provided assurance, as required under 49 U.S.C. 47107(a)(10) (*Airports and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation Act of 1992*) that it has taken reasonable measures to maintain land use compatibility in the airport environs. A copy of MWAA's Assurance Letter is included in Appendix B-3 of the FEIS.

**B. THE INTEREST OF THE COMMUNITIES IN OR NEAR WHERE THE PROJECT MAY BE LOCATED WAS GIVEN FAIR CONSIDERATION (49 U.S.C. 47106(b)(2)).**

FAA has actively involved the local communities and local governments in the EIS process. Coordination efforts with the public included Scoping Meetings, Public Information Workshops Public Hearings, newsletters, web-site postings, direct mailings, and newspaper advertisements. FAA and MWAA also coordinated with representatives of Loudoun and Fairfax counties through Agency Coordination meetings, conference calls, and through the DEIS comment process. A complete description of Public Involvement efforts for the EIS is contained in Chapter 7.0 of the FEIS.

The public and local governments have had ample opportunity to express their thoughts on the project to FAA. FAA, in the preparation of the FEIS, carefully considered, catalogued, and responded to all comments in every subject area (and many comments individually) received from the public as well as from Federal, state, and local agencies (see the FEIS, Appendix L). In some cases, FAA responded by modifying material in the DEIS that now appears in final form as the FEIS. In other cases, FAA provided responses to comments that directed the commenter to the appropriate portion of the FEIS that contained the answer to the comment/question posed. In all cases, the comments provided by local governmental agencies as well as the general public were used to evaluate the thoroughness and accuracy of the DEIS and to adjust it as appropriate.

It is also important to note that the project evaluated in the FEIS was approved by MWAA prior to its submittal to FAA for environmental review and determination of impacts. MWAA's board of directors consists of thirteen voting members, including five members appointed by the Governor of Virginia; three members appointed by the Mayor of the District of Columbia; two members appointed by the Governor of Maryland; and three members appointed by the President with the advice and consent of the Senate.

Through support of the project by MWAA's Board of Directors, made up of representatives of the political jurisdictions surrounding IAD and the results of FAA's public and local governmental coordination efforts, FAA has determined that throughout the environmental process, fair consideration was given to the interest of communities in or near the project location.

**C. *THE PROPOSED FEDERAL ACTION WILL COMPLY WITH THE STATE IMPLEMENTATION PLAN (SIP) IN ACCORDANCE WITH SECTION 176(c)(1) OF THE CLEAN AIR ACT (CAA) AMENDMENTS (42 U.S.C. SECTION 7506(c)).***

FAA prepared a Draft General Conformity Determination for the proposed project which was included as an appendix to the January 2005 DEIS, which, in accordance with the General Conformity Rule, was published and made available for public and agency review and comment for a period of at least 30 days. Based on comments on the Draft General Conformity Determination, FAA conducted additional analysis and converted the document into a Final General Conformity Determination, which was published as an appendix to the FEIS on August 11, 2005.

Both EPA Region III and VDEQ have reviewed the Draft and Final General Conformity Determinations for the Preferred Alternative and have determined that all the relevant issues have been addressed (see ROD Appendix A).

Based on the air quality information and discussion presented in the FEIS and its appendices, and the Final General Conformity Determination (FEIS Appendix G-5), and upon supporting material in the administrative record, FAA finds that the emissions associated with the Preferred Alternative will not cause or contribute to the exceedance of any air quality standards and do conform to the goals and objectives of the current Commonwealth of Virginia SIP and the NAAQS for the Washington-Dulles Metropolitan project area.

**D. FOR THIS PROJECT, INVOLVING NEW CONSTRUCTION THAT WOULD DIRECTLY AFFECT WETLANDS, THERE IS NO PRACTICABLE ALTERNATIVE TO SUCH CONSTRUCTION. THE PROPOSED PROJECT INCLUDES ALL PRACTICABLE MEASURES TO MINIMIZE HARM TO WETLANDS THAT MAY RESULT FROM SUCH USE (EXECUTIVE ORDER 11990, AS AMENDED, AVOIDANCE AND MINIMIZATION OF HARM TO WETLANDS).**

See finding and determination “E” below.

**E. FOR THIS PROJECT, WHICH INVOLVES ENCROACHMENT ON A FLOODPLAIN, THERE IS NO PRACTICABLE ALTERNATIVE TO THE DEVELOPMENT OF THE PREFERRED ALTERNATIVE. THE PROPOSED ACTION CONFORMS TO ALL APPLICABLE STATE AND/OR LOCAL FLOODPLAIN PROTECTION STANDARDS (EXECUTIVE ORDER 11988).**

These Executive Orders require all Federal agencies to avoid providing assistance for new construction located in wetlands and floodplains, unless there is no practicable alternative to such construction, and all practicable measures to minimize harm to wetlands are included in the action.

Complete avoidance of impacts to wetlands, streams, and 100-year floodplains associated with the Preferred Alternative is not feasible due to the large area of land disturbance required, and the need to meet specific airfield design criteria (e.g., FAA AC 5300-13, *Standards and Recommendations for Airport Design*). Significant efforts were made during the alternatives planning process to avoid and/or minimize impacts to wetlands, streams, and 100-year floodplains through consideration of numerous project alternatives, including the No-Action Alternative. See Chapter 3.0 of the FEIS for the complete evaluation of Alternatives conducted for the FEIS.

Because impacts to wetlands could not be avoided, MWAA must therefore obtain a permit from the USACE under Section 404 of the CWA and from the VDEQ as a prerequisite to proceeding with any airport development under the approvals contained in this ROD. MWAA submitted a JPA to the USACE and VDEQ in April 2005. MWAA is currently working with the USACE and VDEQ to refine the wetland mitigation program that was submitted as part of the JPA and which will ultimately be implemented by the MWAA.

FAA included a summary of the MWAA's Wetlands Mitigation Program in FEIS Section 6.3. A full copy of the MWAA's program is included in the JPA documents that have already been submitted to the USACE and the VDEQ. Based on continued coordination with these agencies, the mitigation program may undergo further refinement prior to its approval by the USACE and VDEQ. Through coordination with the USACE and VDEQ, FAA has reasonable assurance that the MWAA will be able to obtain both the Section 404 Permit and the Section 401 Certification. Thus, the approvals of this ROD are conditioned on the MWAA obtaining a Section 404 Permit from the USACE and compliance with the wetland mitigation program.

***F. RELOCATION ASSISTANCE (42 U.S.C. 4601 ET SEQ.).***

As discussed in FEIS Section 5.3, the Preferred Alternative will not result in the need to displace any homes or businesses in order to construct the proposed project. However, as described in FEIS Section 5.1, two homes within the DNL 65 dB noise contour in the year 2025 would be considered incompatible with projected noise levels, and mitigation measures are required. MWAA has committed to mitigation consisting of relocating these homes if they are still in residential use at the time new Runway 12R/30L is constructed. If mitigation of these impacts is necessary and required, the mitigation for the approvals given under this ROD relating to displacement impacts caused by the project will be accomplished through relocation assistance, whether or not the project receives Federal funding assistance. FAA will require the MWAA to provide fair and reasonable relocation payments and assistance payments pursuant to the provision of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Comparable decent, safe, and sanitary dwellings are available for occupancy on the open market.

**G. THE FAA HAS GIVEN THE PROPOSAL THE INDEPENDENT, THOROUGH, AND OBJECTIVE EVALUATION REQUIRED (CEQ REGULATIONS 40 CFR 1506.5).**

As documented in the FEIS and this ROD, FAA engaged in a lengthy and extensive series of actions needed to evaluate the sponsor's original proposal. These included identifying the project purpose, screening and selecting reasonable alternatives and ultimately of the Preferred Alternative, fully discovering and disclosing potential impacts, and selecting appropriate mitigation measures. From its inception, the Airport Sponsor's proposal has required FAA to take an independent and objective leadership role in the environmental evaluation. From consideration and revision of alternatives, to response to public and private comments, to amendments to the presentation of impacts in the FEIS, to the ROD determination itself, FAA has provided the independent and objective evaluation of the proposed project required by the CEQ.

**H. APPROPRIATE ACTION, INCLUDING THE ADOPTION OF ZONING LAWS, HAS BEEN OR WILL BE TAKEN TO THE EXTENT REASONABLE TO RESTRICT THE USE OF LAND NEXT TO OR NEAR THE AIRPORT TO USES THAT ARE COMPATIBLE WITH NORMAL AIRPORT OPERATIONS (49 U.S.C. 47107(a)(10)).**

MWAA has indicated to FAA that it continues to work with the local jurisdictions to develop and implement plans and policies to ensure compatible land use in the airport vicinity. FAA requires satisfactory assurances, in writing, that appropriate action, including the adoption of zoning laws, has or will be taken to restrict, to the extent reasonable, the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. FEIS Appendix B-3 contains MWAA's land use compatibility assurance letter.

Based on the administrative record for this ROD, FAA has concluded that MWAA's work with local jurisdictions will provide for appropriate action to ensure compatible land use in the airport vicinity.

**I. EFFECT ON NATURAL RESOURCES (49 U.S.C. 47106(c)(1)(C)).**

Under this statutory provision, after consultation with the Secretary of the Interior and the Administrator of the EPA, FAA may approve funding of a new runway having a significant adverse effect on natural resources, only after determining that no possible and prudent alternative to the project exists and that every reasonable step has been taken to minimize the adverse effect.



As documented in the FEIS, FAA has consulted with the Department of the Interior and EPA. For several natural resource impact categories with established significance levels, the FAA finds that, without implementation of the mitigation summarized in FEIS Section 6.3, the selected alternative would have a significant adverse effect. However, given the inability of other alternatives discussed in the FEIS to satisfy the purpose and need of the proposed project, FAA has concluded that no possible and prudent alternative exists to development of the Preferred Alternative. As discussed in the FEIS and JPA, every reasonable step has been taken to minimize adverse environmental effects resulting from the proposed project.

In order to consider further mitigation under NEPA, and to address any possible adverse environmental effects resulting from the projects approved in this ROD, FAA will condition such approval upon the mitigation measures described in FEIS Section 6.3 and ROD Appendix C. This conditional approval will be enforced through a special condition included in future Federal airport grant agreements.

FAA has determined that through mitigation, all reasonable steps have been taken to minimize any adverse effects on natural resources.

***J. MWAA HAS PROVIDED THE OPPORTUNITY FOR A PUBLIC HEARING TO CONSIDER ECONOMIC, SOCIAL, AND ENVIRONMENTAL EFFECTS OF THE LOCATION AND THE LOCATION'S CONSISTENCY WITH THE OBJECTIVES OF ANY PLANNING THAT THE COMMUNITY HAS CARRIED OUT (49 U.S.C. 47106(1)(a)(I)).***

MWAA has provided the opportunity for a public hearing. Two public hearings were held, one in each affected county jurisdiction. These public hearings were held on February 22, 2005 in Loudoun County and on February 23, 2005 in Fairfax County. Details of the public hearings are contained in Section 7.6 of the FEIS.

***K. FOR ACTIONS INVOLVING AIRPORT LOCATION, RUNWAY LOCATION, OR A MAJOR RUNWAY EXTENSION, AND FOUND TO HAVE A SIGNIFICANT ADVERSE EFFECT, THERE SHALL BE EVIDENCE TO SUPPORT THE CONCLUSION THAT (a) THERE IS NO FEASIBLE AND PRUDENT ALTERNATIVE, AND (b) ALL REASONABLE STEPS HAVE BEEN TAKEN TO MINIMIZE ADVERSE EFFECTS (49 U.S.C. 47106 (c)(1)(B)).***

FAA developed and evaluated numerous alternatives as part of the EIS process and retained three alternatives for detailed environmental analysis and comparison. The three alternatives considered in

detail in the FEIS have clear advantages and disadvantages. The No-Action Alternative has fewer adverse environmental impacts, but it does not meet the Level 1 screening criteria including a new north-south parallel runway immediately capable of dual simultaneous independent operations during IMC while reserving the capability of triple simultaneous independent operations during IMC in the future, a new east-west parallel runway capable of dual simultaneous independent operations during IMC, or redundant runways. The two Build Alternatives met all of the Level 1 screening criteria. However, each of the Build Alternatives is costly and would result in unavoidable adverse environmental impacts.

The avoidance of wetland and floodplain impacts was considered during the initial formulation of on-site alternative runway configurations. However, due to numerous specific safety, operational, and preliminary engineering siting requirements, it was determined that all of the Build Alternatives would result in unavoidable impacts to wetland and floodplain resources. As originally envisioned, the Preferred Alternative would have impacted a total of 286.1 acres of jurisdictional wetlands; 124,045 linear feet of streams; and 39 acres of 100-year floodplains. Refined design efforts by MWAA to minimize wetland and stream impacts have resulted in a reduction in impacts as a result of "fill" activities. The actual loss of wetlands and streams by fill for the Preferred Alternative is now estimated to be 174.7 acres of wetlands and 60,858 linear feet of streams. The design revisions by MWAA to reduce wetland and stream impacts will also result in reduced impacts to 100-year floodplains, which are still being finalized by MWAA. The floodplain encroachment is considered non-significant encroachment with the implementation of mitigation measures and the public has been advised of the floodplain impacts through FAA's Public Involvement Program.

The FEIS and Appendix C of this ROD demonstrate that the mitigation measures included to address unavoidable environmental impacts will minimize the adverse effects of the Preferred Alternative. FAA has determined that there is no possible prudent alternative to the proposed project. Other alternatives either would not fulfill the purpose and need for the proposed project or result in greater environmental impacts than the Preferred Alternative. Further, FAA has determined that every reasonable step has been taken to minimize the adverse effect through the imposition of mandatory mitigation measures.

Based on careful evaluation of the analyses included in the FEIS and on comments provided by Federal, state, and local agencies as well as the public and elected officials, FAA has determined that the Preferred Alternative would result in the least overall environmental impacts. The FEIS documentation supports this conclusion and identifies mitigation measures in Chapter 6.0 that would be included as part of the Preferred Alternative.

In addition, the USACE, in a letter dated September 7, 2005, concurred that the Preferred Alternative is the least environmentally damaging practicable alternative (LEDPA).

## **XI. DECISION AND ORDER**

Implementation of the Preferred Alternative would result in a reduction of aircraft delay to acceptable levels and provide for the safe and efficient use of the airport. The Preferred Alternative would also result in overall benefits to the National Airspace System.

FAA's decision is based on a comparative examination of environmental impacts for each of the alternatives analyzed in the FEIS. The FEIS provides a fair and full discussion of any significant impacts. The EIS process included appropriate planning and design for avoidance, minimization, and/or compensation of impacts, as required by NEPA, the CEQ implementing regulations, other special purpose environmental laws, and appropriate FAA environmental directives.

FAA has determined that environmental and other relevant concerns presented by interested agencies and private citizens have been addressed in the FEIS. FAA believes that with respect to the proposed project, there are no outstanding environmental issues within FAA jurisdiction to be studied or NEPA requirements that have not been met.

Having made this determination, FAA must decide whether to approve the Federal actions necessary for project implementation. FAA approval would signify that applicable Federal requirements relating to airport development planning have been met and would permit MWAA to proceed with design and specifications for the proposed development and possibly receive Federal funds for eligible items. Not approving these actions would prevent MWAA from proceeding with development in a timely way.

For reasons summarized earlier in this ROD, supported by disclosures and analysis presented in detail in the FEIS, FAA has determined that MWAA's proposed project, described as the Preferred Alternative - is reasonable, feasible, practicable, and prudent, in light of both Federal and Sponsor goals and objectives. An FAA decision to take the actions and approvals requested by the Sponsor is consistent with FAA's statutory mission and policies. This decision is supported by the environmental findings and conclusions presented in the FEIS and ROD.

After reviewing the FEIS and related materials, I have fully and carefully considered FAA's goals and objectives as to aeronautical aspects of the proposed development projects and related activities at IAD. These include purpose and need for this project, alternative means of achieving these objectives, the environmental impacts of the alternatives, the mitigation necessary to preserve and enhance the environment, national transportation policies within which the FAA operates, and the costs and benefits of achieving the purpose and need in terms of efficiency and fiscally responsible expenditures of Federal funds.

While this decision neither grants Federal funding nor constitutes a funding commitment, it does fulfill the environmental analysis prerequisites for Federal funding determinations to be made. FAA will review funding requests upon receipt from MWAA of a timely application for Federal grant-in-aid, and FAA will make funding decisions in accordance with statutory and regulatory requirements.

Accordingly, pursuant to the authority delegated to me by the Administrator of the FAA, I find that the actions summarized in this ROD are reasonably supported and approved. For those actions, I hereby direct that action be taken, together with the necessary related and collateral actions, to carry out the agency decisions as detailed in this ROD, including:

1. Determinations under 49 U.S.C. Sections 47106 and 47107 pertaining to FAA funding of airport development (including approval of a revised ALP, 49 U.S.C. 47107(a)(16), environmental approval (42 U.S.C. 4321-4347 and 40 CFR Parts 1500-1508), and approvals under various Executive Orders discussed in the ROD.

2. Determination that the project is eligible for Federal grant-in-aid funds (49 U.S.C. 47101, *et. seq.*) and PFC funds (49 U.S.C 40117), for land acquisition and relocation (49 CFR Part 24), site preparation, runway, taxiway, runway safety area, and other airfield construction, terminal facility and related landside development, navigational and landing aids, and environmental mitigation.
3. Determination that air quality impacts associated with the proposed new runways and associated development conform to applicable air quality standards under the CAA, as amended (42 U.S.C. 7506 and 176(c)(1) and 40 CFR Part 93). (FAA issued a Final General Conformity Determination on August 11, 2005, which is included in the FEIS, Appendix G-5).
4. Determination that the potential impacts to approximately 286.1 acres of wetlands can be mitigated and that there would be no undue burden or unusual circumstances barring the Sponsor from obtaining a Section 404 permit for the filling of wetlands.
5. Approval to provide air traffic controller training and updated position responsibilities for new simultaneous approach/departure procedures and all ATC procedures related to the new runways (e.g. approval and development of arrival procedures and ATC procedures used in enroute and terminal airspace).
6. Determination that there would be no undue burden or unusual circumstances barring the Sponsor from obtaining a NPDES permit for stormwater and wastewater discharges (CWA, Section 402(p), as amended).
7. Determination that the proposed new runway conforms to FAA design criteria.
8. Determination that the proposed project is consistent with the Virginia Coastal Zone Management Program (CZMP) (FAA issued the Final CZMP Consistency Determination on August 11, 2005, which is included in the FEIS, Appendix C-3).

9. Approval of protocols for maintaining coordination among Sponsor offices, construction personnel, and appropriate FAA program offices, as required, to ensure safety during construction.
10. Decisions to modify and/or develop air traffic control and airspace management procedures to affect the safe and efficient movement of air traffic to and from the proposed new runways. This includes the development of a system for routing arriving and departing traffic and the design, establishment, and publication of standardized flight operations procedures, including instrument approach procedures, standard instrument departure procedures, and new flight procedures into and out of the airport and specifically for the new runways (49 U.S.C. 40103(b) and 44701 and 14 CFR Part 95).
11. Approvals for establishment of new instrument landing systems (ILS) and associated approach lighting systems and NAVAIDS, as appropriate, for the new runways, the existing runways, and the airport as a whole (49 U.S.C. 44502(a)(1)).
12. Determinations through the aeronautical study process (49 U.S.C. 44718 and 14 CFR Part 77), regarding any off-airport obstacles that might obstruct the navigable airspace under established standards and criteria (49 U.S.C. 40103(b) and 40113).
13. Approval to develop air traffic facility procedures for departure headings, simultaneous approaches, airspace procedures, and position responsibilities.
14. Approval to develop new video maps for the new runways and associated airspace.
15. Designation of controlled airspace and revised routing (14 CFR Parts 71 and 75).
16. Determinations that the proposed project is in conformance, for environmental purposes only, with Federal grant eligibility and other requirements, pursuant to 14 CFR Parts 77, 150, 152, 157, and 169.
17. Review and approval of amended Airport Certification Manual (14 CFR Part 139).

18. Determinations under 14 CFR Part 157 as to whether FAA objects to the airport development proposal from an airspace perspective, based on aeronautical studies (49 U.S.C. 40113(a)).

Based on the administrative record of this project, I certify, as prescribed by 49 U.S.C. 44502(b), that implementation of the proposed project is reasonably necessary for use in air commerce.

*ISSUED IN JAMAICA, NEW YORK*

  
\_\_\_\_\_  
Manny Weiss, FAA Eastern Regional Administrator

10/14/05  
\_\_\_\_\_  
Date

This ROD presents the FAA's final decisions and approvals for the actions identified, including those taken under title 49 of the United States Code, Subtitle VII, Parts A and B. This decision, as well as subsequent approval of the project for Federal assistance, constitutes an order of the Administrator subject to review by the Courts of Appeals of the United States in accordance with provisions of 49 U.S.C. 46110.

# **Appendix A**

## **FEIS Comment Letters and Responses**

This appendix contains a summary of the substantive comments on the FEIS submitted to the FAA during the 30-day FEIS review period and FAA's responses to the environmental issues on matters within its jurisdiction and authority raised by those comments. The comment responses are followed by copies of the actual comment letters submitted to FAA.



## COMMENTS AND RESPONSES ON THE FINAL EIS

FAA received comments on the August 11, 2005 FEIS from the U.S. Environmental Protection Agency (USEPA); the Commonwealth of Virginia Department of Environmental Quality, Loudoun County, Virginia; Fairfax County, Virginia, and the Commonwealth of Virginia, Department of Health, Office of Drinking Water.

The majority of comments received were reiterations of comments submitted to FAA on the DEIS, which FAA has either already responded to in the FEIS (see FEIS Appendix L-4), or which FAA has revised the DEIS and incorporated the requested information commented on in the FEIS. Those comments that FAA believes were already adequately responded to, were already addressed in the FEIS, or are not relevant to the FEIS are not included in this Appendix.

The following presents the substantive and relevant comments on the FEIS that were received by FAA. Wherever possible, these comments have been summarized. In some cases, the comments on the FEIS were complex and are included here in their entirety so that that the concept of the comment is presented correctly.

### SUMMARIZED COMMENTS

#### USEPA

**1. Clarify whether MWAA intends to use the previously purchased 200 acres of wetland mitigation bank credits for mitigating the Preferred Alternatives' impacts, and how MWAA will develop/obtain the remaining 73 acres of required wetland mitigation.**

**Response:** MWAA has included the use of the previously purchased and developed 200 acres of wetland mitigation bank credits to mitigate for the majority of wetland impacts associated with the Preferred Alternative in their Joint Permit Application (JPA), and has committed to purchase additional mitigation bank credits for the remainder of the mitigation requirement. MWAA intends to issue a request for proposals (RFP) to obtain the additional required wetland and stream credits. MWAA anticipates participation by representatives from VDEQ, as well as the U.S. Army Corps of Engineers (USACE), the USEPA, and the USFWS on the mitigation bank review team.

**2. The requirements for stream impact mitigation need to be better defined by USACE and DEQ, and mitigation opportunities within Loudoun and Fairfax Counties for the remaining wetland impacts (73 acres) and the stream impacts (60,858 linear feet) should be explored by MWAA.**

**Response:** Through the JPA process, MWAA is currently coordinating with the USACE and VDEQ to identify a protocol for the evaluation of stream impacts and functional value assessment and the implementation of a stream mitigation plan that will be acceptable to both agencies. In addition, MWAA

intends to issue an RFP to obtain the additional required wetland and stream credits. Loudoun and Fairfax counties may participate in identifying potential mitigation sites in the forthcoming procurement for wetland and stream mitigation.

**3. EPA comments regarding air toxics modeling were not adequately addressed in the FEIS.**

**Response:** Additional coordination was accomplished with EPA and EPA has acknowledged that the language contained in the FEIS adequately addresses their comments.

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**1. The DEIS stated that the Preferred Alternative will impact 286.1 acres of wetlands and 124,045 linear feet of streams. These numbers have not been reduced in the FEIS.**

**Response:** Based on the limits of disturbance that were used in the DEIS and FEIS for the comparative evaluation of alternatives, the total number of wetlands impacted by the alternatives has not changed. However, as the design of the Preferred Alternative and the JPA process progresses, additional means to avoid and minimize fill impacts to wetlands and streams may be realized.

**2. The Department of Game and Inland Fisheries generally does not support proposals to mitigate wetland impacts through the construction of stormwater management ponds; nor does it support the creation of in-stream stormwater management ponds.**

**Response:** MWAA is proposing the construction of 16 drainage systems for the Preferred Alternative. Ten of these drainage systems are associated with the proposed Runway 1W/19W, and the remaining six are associated with the proposed Runway 12R/30L. These drainage systems consist of drainage inlets, drain pipes, grass swale drainage channels, and biological treatment units (BTUs). The BTUs function as dry bio-retention basins, rather than wet stormwater management ponds. All BTUs are located outside of streams. MWAA does not propose the development of on-site stormwater ponds for wetland mitigation purposes. Some functions of the wetlands are provided on-site through the use of BTUs and other elements of the stormwater management plan. MWAA is providing mitigation for other wetland functions, such as habitat replacement, at off-airport locations.

**3. Mitigation for stream impacts should take place within the same watershed as the project impacts, and preferably within the documented range of wood turtles.**

**Response:** FAA has specific guidance restricting the development of hazardous wildlife attractants in close proximity (within 5 miles) of an airport. MWAA is working closely with the USACE and VDEQ to establish appropriate locations for the mitigation of stream impacts. MWAA proposes to issue an RFP to obtain the additional wetland mitigation banking credits and linear feet of stream mitigation banking credits. Potential mitigation sites within both Loudoun and Fairfax counties that are within the same watershed as the project impacts will be considered by MWAA. Loudoun and Fairfax counties may

participate in identifying potential mitigation sites in the forthcoming procurement for wetland and stream mitigation. The results of the FEIS evaluation conducted for potential impacts to the wood turtle indicate that the Preferred Alternative will not result in impacts to the wood turtle. MWAA will, in its evaluation of potential stream mitigation sites, take into consideration the range of the wood turtle.

**4. The purchase of wetland credits from the Cedar Run and Licking Run mitigation sites is acceptable to the Department of Game and Inland Fisheries.**

**Response:** MWAA intends to use the previously purchased and developed 200 acres of wetland mitigation bank credits to mitigate for the majority of wetland impacts associated with the Preferred Alternative, and to purchase additional mitigation bank credits for the remainder of the mitigation requirement. MWAA has included this in their JPA.

**5. Given the extensive nature of the proposed impacts, it would be appropriate for the project proponents to search the immediate vicinity of the project for restoration opportunities to replace the lost functions and values directly within the sub-watersheds being affected, commensurate with FAA Advisory Circular 150/5200-33A, “Hazardous Wildlife Attractants On or Near Airports.”**

**Response:** FAA has specific guidance restricting the development of hazardous wildlife attractants in close proximity (within 5 miles) of an airport. MWAA is working closely with the USACE and VDEQ to establish appropriate locations for the mitigation of wetland and stream impacts. MWAA proposes to issue a RFP to obtain the additional required wetland mitigation banking credits and linear feet of stream mitigation banking credits. Potential mitigation sites within both Loudoun and Fairfax counties that are within the same watershed as the project impacts will be considered by MWAA. Mitigation sites within 5 miles of IAD would be acceptable provided they do not result in an attraction to hazardous wildlife within approach and departure airspace. Loudoun and Fairfax counties may participate in identifying potential mitigation sites in the forthcoming procurement for wetland and stream mitigation

**6. As applicable, MWAA should incorporate Loudoun County’s and Fairfax County’s stricter water quality, stormwater, and erosion and sediment controls in the design plans and specifications for the Preferred Alternative.**

**Response:** Section VIII and Appendix C of the ROD discuss water quality impacts and water quality mitigation measures, respectively, which will be implemented by MWAA for the Preferred Alternative. Since detailed design plans have not yet been completed by MWAA, quantification of specific peak discharges and potential downstream sedimentation and erosion is not possible at this time. The specific design parameters for stormwater management, water quality and erosion and sediment control as well as other water quality design guidelines that will govern the construction and operation of the Preferred Alternative are being developed as part of the permit programs of the Virginia Department of Conservation and Recreation (VDNR) and VDEQ, which will determine which design controls need to be incorporated into the final design documents. MWAA [and its contractors] will comply with the stormwater management design requirements that are included in the permit.

**7. The Department of Game and Inland Fisheries recommends that the proponent provide habitat restoration and enhancement to offset the negative impacts of the project to migratory birds, other fish and wildlife resources and wildlife-related recreation. In light of the impacts proposed, DGIF believes that habitat replacement is reasonable and practical. As with wetland mitigation sites, upland mitigation sites do not have to be in immediate proximity to the airport. DGIF recommends an analysis of land cost and availability in the region surrounding the airport.**

**Response:** Recent land acquisition by MWAA completed in March 2005 of unimproved land west of the existing airport has indicated that costs of such land would not be practicable. It is unlikely that acquisition of sufficient acreage of land suitable for either creation or conservation of upland forests would be considered reasonable or practicable on the basis of cost and availability of land.

As part of the design efforts for the Preferred Alternative, MWAA has strived to develop a configuration and specific engineering details that minimize upland community impacts. Best Management Practices (BMPs) would be used to minimize impacts to upland biotic communities to the greatest extent practicable during construction.

**8. The Northern Virginia Regional Commission recommends that an assessment of long term cumulative impacts should include the development planned for the Broad Run and Cub Run/Bull Run watersheds. This is important in light of a current proposal for a 123-acre university campus and 15,000 houses on land immediately west of the airport, in the Broad Run watershed and within or near the 60 DNL noise contour.**

**Response:** Section 5.23 of the FEIS provides an evaluation of cumulative impacts associated with known projects, both on- and off-airport, that are scheduled for implementation by a jurisdictional entity. As of the publication of the FEIS, the FAA was not aware of any approved plans to develop a university campus and 15,000 homes on land immediately west of IAD. Both projects are speculative at this time, with the university evaluating other alternative sites, and no development approvals granted to the land development company for the development of 15,000 homes. Since neither of these projects is a reality as of the publication of the FEIS, FAA did not include them in the cumulative impacts analysis.

## **LOUDOUN COUNTY**

**1. Mitigation opportunities within Loudoun and Fairfax Counties for the remaining wetland impacts (73 acres) and the stream impacts (60,858 linear feet) should be explored by MWAA, commensurate with FAA Advisory Circular 150/5200-33A, "Hazardous Wildlife Attractants On or Near Airports."**

**Response:** FAA has specific guidance restricting the development of hazardous wildlife attractants in close proximity (within 5 miles) of an airport. MWAA is working closely with the USACE and VDEQ to establish appropriate locations for the mitigation of wetland and stream impacts. MWAA proposes to issue an RFP to obtain the additional wetland mitigation banking credits and linear feet of stream mitigation banking credits. Potential mitigation sites within both Loudoun and Fairfax counties that are

within the same watershed as the project impacts will be considered by MWAA. Mitigation sites within 5 miles of IAD would be acceptable provided they do not result in an attraction to hazardous wildlife within approach and departure airspace. Loudoun and Fairfax counties may participate in identifying potential mitigation sites in the forthcoming procurement for wetland and stream mitigation.

**2. The County recommends that there be no increases in peak flows for the 1, 2, 10, and 100-year storms and that there be no increases in flood elevations for the 100-year event for off-airport downstream properties.**

**Response:** The stormwater management design for IAD will be completed in accordance with applicable requirements to address floodplain impacts from the Preferred Alternative. Please see Section 6.3 of the FEIS and Appendix C of this ROD for floodplain mitigation measures. The floodplain analysis in the FEIS did not identify any significant impacts to IAD floodplains after appropriate mitigation measures are implemented.

**3. County staff recommends that MWAA commit to holding tanks and oil/water separators as a means to control stormwater runoff quality and prevent contamination of area surface waters.**

**Response:** Water quality issues associated with the Preferred Alternative are addressed in Sections 4.3.3, 5.6, 6.2, and 6.3 of the FEIS. MWAA will obtain all required permits to adequately address water quality issues associated with the Preferred Alternative prior to construction activities. MWAA is still preparing the design for the proposed improvements; however, a holding tank for spent aircraft deicing fluid is planned for the Preferred Alternative at this time. A discussion of other types of above and below ground materials storage tanks is provided in Section 5.20 of the FEIS.

**4. MWAA should incorporate Loudoun County's stricter erosion and sediment controls in the design plans and specifications for the Preferred Alternative.**

**Response:** Section VIII and Appendix C of this ROD discuss water quality impacts and water quality mitigation measures, respectively, which will be implemented by MWAA for the Preferred Alternative. Since detailed design plans have not yet been completed by MWAA, quantification of specific peak discharges and potential downstream sedimentation and erosion is not possible at this time. The specific design parameters for erosion and sediment control as well as other water quality design guidelines that will govern the construction and operation of the Preferred Alternative are being developed as part of the permit programs for VDCR and VDEQ, which will determine which design controls need to be incorporated into the final design documents. MWAA [and its contractors] will comply with the stormwater management design requirements that are included in the permit.

#### **FAIRFAX COUNTY**

**1. The County requests that FAA and MWAA evaluate flight operations to and from the existing and new runways to determine if operational changes (preferential runway use and flight track modifications) can reduce impacts to residential areas and other noise sensitive areas (e.g., the**

**Sully Historic Site). In addition, the noise contour presentations should include the DNL 60 dBA contours, as both Loudoun and Fairfax Counties rely on noise contour projections down to the DNL 60 dBA for their land use compatibility policies and requirements.**

**Response:** The operational/airspace assumptions used in the FEIS were developed through coordination with the Dulles Airport Traffic Control (ATCT) and the Potomac Terminal Radar Approach Control (TRACON) and represent the most efficient operation of the airport with the fourth and fifth new runways during different flow conditions.

Modified flight patterns and preferential runway use procedures are implemented as a mitigation measure for significant noise impacts. Since the noise analysis in the FEIS indicates that the Preferred Alternative would not result in significant noise impacts to noise sensitive areas in 2010, and that only two homes would be significantly impacted in the year 2025, mitigation measures such as modified flight patterns and preferential runway use procedures are not warranted. MWAA has committed to mitigating the two homes impacted by the 2025 noise contours if they are still in residential use when proposed Runway 12R/30L becomes operational.

Impacts to the Sully Plantation were evaluated in terms of potential noise, vibration, and visual impacts. Section 5.8.3 of the FEIS presents the detailed results of the noise, vibration, and visual analysis at Sully Plantation due to overflights. The noise analysis indicates that average noise levels at the Sully Plantation would be lower under the Preferred Alternative than they would under the No-Action Alternative. In addition, FAA determined that proposed Runway 12R/30L would not result in vibration impacts to the Sully Plantation.

It is FAA's policy based on its threshold of significance of DNL 65 dBA to show the DNL 65 dBA noise contour in its NEPA documents, which is what the FEIS depicted. However, the FEIS also depicted the DNL 60 dBA noise contours in Section 5.1 and contained an evaluation of the change of 3 dB within the DNL 60 dBA noise contour for disclosure purposes. The DNL 60 dBA contour can be provided to the County for local land use planning efforts after the publication of FAA's Record of Decision.

**2. MWAA should incorporate Fairfax County's stricter erosion and sediment controls in the design plans and specifications for the Preferred Alternative. Also, the County recommends that there be no increases in peak flows for the 1, 2, 10 and 100-year storms and that there be no increases in flood elevations for the 100-year event for off-airport downstream properties.**

**Response:** Section VIII and Appendix C of this ROD discuss water quality impacts and water quality mitigation measures, respectively, which will be implemented by MWAA for the Preferred Alternative. Since detailed design plans have not yet been completed by MWAA, quantification of specific peak discharges and potential downstream sedimentation and erosion is not possible at this time. The specific design parameters for erosion and sediment control as well as other water quality design guidelines that will govern the construction and operation of the Preferred Alternative are being developed as part of the permit programs of VDCR and VDEQ, which will determine which design controls need to be incorporated into the final design documents. MWAA [and its contractors] will comply with the stormwater management design requirements that are included in the permit.

In addition, the stormwater management design for IAD will be completed in accordance with applicable requirements to address floodplain impacts from the Preferred Alternative. Please see Section 6.3 of the FEIS and Appendix C of this ROD for floodplain mitigation measures. The floodplain analysis in the FEIS did not identify any significant impacts to IAD floodplains after appropriate mitigation measures are implemented.

**3. To the extent possible, wetland mitigation efforts should be pursued in the same subwatershed(s) as the impacts in order to fully mitigate the impacts where they will be experienced. In addition, with regard to stream mitigation areas, there are numerous areas within stream valley parks in the Cub Run watershed in Fairfax County that the County believes would be consistent with FAA AC 150/5200-33A.**

**Response:** FAA has specific guidance restricting the development of hazardous wildlife attractants in close proximity (within 5 miles) of an airport. MWAA is working closely with the USACE and VDEQ to establish appropriate locations for the mitigation of wetland and stream impacts. MWAA proposes to issue an RFP to obtain the additional wetland mitigation banking credits and linear feet of stream mitigation banking credits. Potential mitigation sites within both Loudoun and Fairfax counties that are within the same watershed as the project impacts will be considered by MWAA. Mitigation sites within 5 miles of IAD would be acceptable provided they do not result in an attraction to hazardous wildlife within approach and departure airspace. Loudoun and Fairfax counties may participate in identifying potential mitigation sites in the forthcoming procurement for wetland and stream mitigation.

**4. The County recommends that efforts be made to locate and move marsh hedgenettle plants from the areas of impact to areas that will not be impacted where this species has also been found at Dulles Airport.**

**Response:** The marsh hedgenettle is ranked on Virginia's Division of Natural Heritage rare plant list. According to the USFWS, mitigation measures are not warranted since this plant is not Federally protected. Marsh hedgenettle has been found at two locations at IAD, one of which is within the limits of disturbance of the project. At this one location avoidance is not practicable. This species is not listed as threatened or endangered by the Commonwealth of Virginia.

**5. The County recommends that MWAA establish a process through which long-term transportation needs will be evaluated and addressed through coordination with appropriate state and local agencies.**

**Response:** MWAA already coordinates its surface transportation needs and planning efforts with the Metropolitan Washington Council of Governments (MWCOCG), which serves as the areas transportation planning commission as well as with numerous other transportation planning agencies and organizations.

**6. The County recommends that MWAA evaluate operational alternatives that may serve to reduce the extent of the adverse impact to the Sully Historic Site and would welcome the opportunity to participate in a review of such alternatives.**

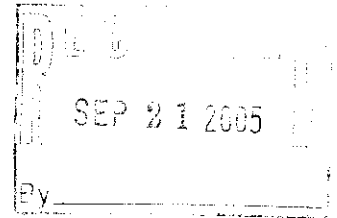
**Response:** FAA does not agree that the Sully Historic Site would experience adverse effects from the Preferred Alternative. Impacts to the Sully Plantation were evaluated in terms of potential noise, vibration, and visual impacts. Section 5.8.3 of the FEIS presents the detailed results of the noise, vibration, and visual analysis at Sully Plantation due to overflights. The noise analysis indicates that average noise levels at the Sully Plantation would be lower under the Preferred Alternative than they would under the No-Action Alternative. In addition, FAA determined that proposed Runway 12R/30L would not result in vibration or visual impacts to the Sully Plantation. The SHPO has concurred with FAA's determination of no adverse impact. Therefore, mitigation measures such as aircraft operational alternatives are not warranted.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III

1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029



September 19, 2005

Mr. Brad Mahaffy  
Federal Aviation Administration  
Washington Airports District Office  
23723 Air Freight Lane, Suite 210  
Dulles, VA 20166

Subject: Washington Dulles International Airport, Final Environmental Impact Statement/Section 4(f) Evaluation (DEIS). CEQ # 20050131

Dear Mr. Mahaffy:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act and Section 404 of the Clean Water Act (CWA), the Environmental Protection Agency (EPA) offers the following comments regarding the New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport, Final Environmental Impact Statement/Section 4(f) Evaluation (FEIS).

The Metropolitan Washington Airports Authority (MWAA) is proposing major new improvements to Dulles Airport (IAD) that are intended to enable the airport to safely and efficiently meet forecasted levels of aviation activity. MWAA's proposed project, which is the focus of the FEIS, includes adding two new parallel runways to the existing three runway configuration. The proposed project also includes associated taxiways, navigational aides, property acquisition, new concourse development, relocation of the National Weather Service Sterling, VA facilities and extension of the Automated People Mover (APM).

The most significant environmental impacts identified in the FEIS include the loss of over 1900 acres of undeveloped natural habitat located on the airport property which includes direct impacts to 175-180 acres of wetlands and over 60,000 linear feet of streams.

Since our comments on the DEIS, the Federal Aviation Administration (FAA) and MWAA contacted EPA to discuss their proposed response to our comments on the DEIS. The FEIS reflects these discussions and EPA has no further comment on purpose and need or alternatives.

In general the FEIS does an adequate job in assessing the affected environment and environmental consequences. However, regarding wetland and stream impacts, EPA continues to recommend that the final mitigation package be coordinated with EPA, the Fish and Wildlife Service and other appropriate state and local agencies prior to receiving a Section 404 of the Clean Water Act permit. Indeed, a joint state-federal wetland application has been filed with the Army Corps of Engineers (the Corps) and the Virginia Department of Environmental Quality (DEQ). The permit coordination process is on going at this time.

EPA remains concerned with the large wetland and stream impacts associated with this proposal and is concerned that due to the magnitude of stream impacts that stream compensation may not be achievable locally. According to the FEIS the preferred alternative will require 273 acres of wetland mitigation and will impact 60,858 linear feet of stream (compensation requirement yet to be determined).

The FEIS is somewhat unclear on how these impacts will be mitigated. For example on page 6-10 the FEIS states that MWAA has purchased wetland and stream credits at mitigation banks. Does this mean that all the impacts have been mitigated in this manner or is this reference to the initial purchase of wetland credits

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performed by MWAA several years ago? This should be clarified.] The FEIS does go on to provide more detail regarding wetland mitigation in Section 6.3.4. According to the FEIS MWAA holds the bill of sale for 200 of the required 273 acres of wetland mitigation, thus approximately 73 additional acres of wetland mitigation will be required. (It should be noted that there are more existing wetland mitigation banks potentially available to MWAA than are shown on Figure 6.4.1).

[The mitigation requirements and method for stream impacts remains less resolved than for wetlands. As of yet, no stream compensation requirements have been articulated by DEQ or the Corps and apparently both Loudoun and Fairfax Counties want stream mitigation to occur within their jurisdictions. Although MWAA plans to put out an Request for Proposal (RFP) for stream impacts, this has yet to be done to EPA's knowledge.]

2

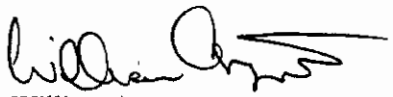
However, notwithstanding our comments above, the FEIS acknowledges a commitment to mitigation and involvement of EPA in the mitigation process. EPA looks forward to working through the remaining wetland and stream compensation issues, including additional avoidance opportunities, during the joint permit process. We recommend a meeting with MWAA, the Corps, DEQ, EPA and FWS as soon as possible to address the remaining compensation issues.

[EPA comments regarding air toxic modeling were not adequately addressed in the final EIS and we recommend that FAA and EPA meet to discuss the requirements of air modeling for this project. EPA looks forward to working through the air modeling issues to reach a consensus of the requirements for this project and future efforts.]

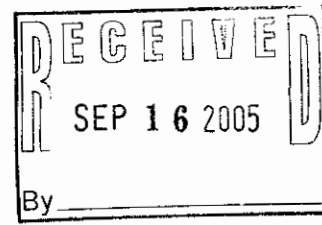
3

If you have any questions or comments regarding this letter please feel free to contact me at 215-814-2995 or Mr. Peter Stokely of my staff at 703-648-4292.

Sincerely,

  
William Arguto,  
NEPA Team Leader

cc: Norfolk District Corps of Engineers  
Fish and Wildlife Service



# COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.  
Secretary of Natural Resources

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September 15, 2005

Mr. Joseph Delia  
Washington Airports District Office  
Federal Aviation Administration, USDOT  
23723 Air Freight Lane, Suite 210  
Dulles, Virginia 20166

RE: Final Environmental Impact Statement for New Runways, Terminal  
Facilities, and Related Facilities at Washington Dulles International Airport  
DEQ-05-215F

Dear Mr. Delia:

The Commonwealth of Virginia has completed its review of the Final Environmental Impact Statement (Final EIS) listed above. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act and responding to appropriate federal officials on behalf of the Commonwealth. In addition, the Department is the lead agency for coordination of Virginia's review of federal consistency determinations filed pursuant to the Coastal Zone Management Act and the Virginia Coastal Resources Management Program. The following state agencies, regional planning district commission, and locality took part in this review:

Department of Environmental Quality  
Department of Game and Inland Fisheries  
Department of Agriculture and Consumer Services  
Department of Conservation and Recreation  
Department of Transportation  
Department of Historic Resources  
Department of Mines, Minerals, and Energy  
Northern Virginia Regional Commission  
Loudoun County.

In addition, the following agencies and locality were invited to comment:

Department of Health  
Marine Resources Commission  
Department of Forestry  
Fairfax County.

We understand that Fairfax County will comment directly to you.

### Project Description

The Metropolitan Washington Airports Authority (MWAA) proposes to build new runways and associated facilities at Dulles International Airport, which is owned by the Federal Aviation Administration (FAA) and leased to MWAA (Final EIS, page 1-1). The Final EIS examines the required no-action alternative, a preferred action alternative ("Build Alternative 3"), and another action alternative ("Build Alternative 4"). Some of the components of Alternative 3, the preferred alternative, include (see Final EIS, page S-2):

- A new north-south runway approximately 9,473 feet long, located 4,300 feet west of the existing Runway 1L/19R;
- A new 10,500-foot east-west runway, located 4,300 feet south of existing Runway 12/30;
- Parallel taxiways for each;
- Taxiway connectors between new and existing taxiways;
- Acquisition of 448 acres of land on the west side of the airport;
- Concourse development.

The Commonwealth reviewed the Draft EIS for this project earlier this year (DEQ-05-009F, comments mailed March 3, 2005, hereinafter "March 3 Comments"). Our comments on the Final EIS take account of the March 3 Comments, as appropriate; and a copy of the March 3 Comments is enclosed.

### Environmental Impacts and Mitigation

*1. Natural Heritage Resources.* The Department of Conservation and Recreation's Division of Natural Heritage has searched its Biotics Data System

for occurrences of natural heritage resources in the project area. "Natural heritage resources" are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations. According to the Biotics Data System, the Cub Run Stream Conservation Unit (SCU) is in the vicinity of the project. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are given a bio-diversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Cub Run SCU has been ranked as a B3 conservation site, which means it is of high significance.

(a) *Animal Species.* The wood turtle (*Glyptemys insculpta*) is associated with this SCU. Wood turtles inhabit forested floodplains and nearby fields, wet meadows, and farmlands; they overwinter on the bottoms of creeks and streams, so a primary habitat requirement is the presence of surface water. See item 7, below.

(b) *Plant Species.* The Department of Conservation and Recreation (DCR) also reports the presence of the marsh hedgenettle (*Stachys pilsoa*) in the project area, as indicated in the earlier Draft EIS (page 5-115). DCR recommends avoiding documented occurrences of this species.

The Department of Agriculture and Consumer Services confirms that the Final EIS addressed endangered plant and insect species.

2. *Air Quality.* DEQ's Air Division has no comments on the Final EIS. (The Division's comments on the Draft EIS are reflected in our Comments on the Draft EIS, DEQ-05-009F, dated March 3, 2005, pages 2-6, item 2).

3. *Water Quality and Wetlands.* [According to DEQ's Office of Wetlands and Water Protection, all wetlands and streams within the construction area would be completely replaced by either impervious surfaces or mowed and maintained uplands. Approximately 286.1 acres of wetlands and 124,045 linear feet of stream are proposed for impacts under the proposed Build Alternative 3.] DEQ's Office of Wetlands and Water Protection and the Department of Game and Inland Fisheries have a number of comments relative to project impacts on wetlands and streams. The project is subject to the Virginia Water Protection Permit requirement; see "Regulatory and Coordination Needs," item 3, below.

1a

(a) *Wetland Impacts.* According to the Department of Game and Inland Fisheries, wetland and stream losses attributable to the proposed project will include the following:

- 71 acres of PFO (palustrine forested) wetlands;
- 67 acres of PEM (palustrine emergent) wetlands;
- 2 acres of POW (palustrine open waters) wetlands
- 0.75 acre of PSS (palustrine scrub-shrub) wetlands;

47 acres of PFO and PSS wetlands will be converted to PEM wetlands;

In addition, as the Final EIS indicates, the project will cause the loss of 124,045 linear feet, or 23.5 miles, of stream (page S-25, Table S-2.)

[The Department of Game and Inland Fisheries generally does not support proposals to mitigate wetland impacts through the construction of stormwater management ponds; nor does it support the creation of in-stream stormwater management ponds (see also item 6(b), below).]

2

[DEQ's Office of Wetlands and Water Protection indicates that the total area of impacts to wetlands and waterways is extensive, and the figure has not changed from the figures given in the Draft EIS.] The Office of Wetlands and Water Protection recommends additional avoidance and mitigation, in keeping with the State Water Control Law (*Virginia Code* section 62.1-44.15:5, subsection D) and the Virginia Water Protection Permit Regulation, 9 VAC 25-210-80. This approach is consistent with the section 404(b)(1) guidelines of the Clean Water Act, which stipulate a sequential approach to wetland mitigation, starting with avoidance as the first priority, followed by minimization of impacts, and then by compensation for unavoidable impacts that cannot be minimized.

1B

(b) *Recommendations for In-stream Activities.* If in-stream construction activities must be undertaken as part of project development, the Department of Game and Inland Fisheries recommends that the FAA, MWAA, or contractors (as the case may be) use the following precautions:

- Conduct in-stream activities during low-flow or no-flow conditions;
- Use non-erodible cofferdams to isolate the construction area;
- Block no more than 50% of the stream flow at any one time;

- Stockpile excavated material in a manner that prevents its re-entry into the stream;
- Restore original streambed and streambank contours after the work is complete;
- Re-vegetate barren areas with native vegetation; and
- Implement strict erosion and sediment control measures (see also item 6(a), below).

In addition, because of the loss of riparian and streambed habitats, and the future maintenance costs associated with culverts, the Department of Game and Inland Fisheries prefers stream crossings to be constructed with clear-span bridges. If this is not possible, that Department recommends counter-sinking any culverts below the streambed at least 6 inches, or else using "bottomless culverts" to allow passage of aquatic organisms. In addition, floodplain culverts should be installed to carry bank-full discharges.

*(c) Recommendations for Wetland and Stream Protection.* In order to protect the habitat of state-listed threatened wildlife species as well as other wildlife, the Department of Game and Inland Fisheries recommends that the project proponents avoid impacts to undisturbed forests and wetlands if possible, and minimize those impacts to the fullest extent practicable. Avoidance and minimization efforts could include:

- relocating stream channels as opposed to channelizing or filling streams;
- using a natural stream channel design and wooded buffers; and
- incorporating the natural stream channel with wooded buffers into the development plan.

The maintenance of undisturbed wooded buffers should include the following:

- 100 to 200 feet in width around all remaining on-site wetlands;
- 100 feet on each side of intermittent streams;
- 300 feet on each side of perennial streams, because of the potential of such streams to support the threatened wood turtle (see item 7, below).

Increased buffer widths will protect water quality and aquatic species by filtering contaminants and sediment, and will provide some compensation for the loss of riparian wildlife habitat (see item 3(d), next). In contrast, buffers of less than 100

feet will result in significant loss of wildlife habitat value for the affected wetlands or streams, and should be compensated.

(d) *Recommendations for Wetland and Stream Impacts Mitigation.* Compensatory mitigation should be provided for unavoidable impacts to forested wetlands in order to protect wildlife, in the judgment of the Department of Game and Inland Fisheries. Recommended ratios of in-kind compensation are:

- for loss of forested wetlands, at least 2 acres replacement for 1 acre of loss, or 2:1;
- for loss of scrub-shrub wetlands, at least 1.5:1;
- for loss of emergent wetlands, at least 1:1;
- for loss of open-water wetlands, at least 1:1;
- for converted PFO and PSS wetlands (see item 3(a), above), at least 1:1.

The first three of these ratios are required by DEQ's Virginia Water Protection Permit Regulations, according to DEQ's Division of Water Quality. Ratios for preservation instead of in-kind compensation would be higher.

In addition, for stream impacts, the Department of Game and Inland Fisheries recommends mitigation of at least 1:1, based on full restoration of a similarly functional stream. Stream enhancement or preservation-only mitigation should require ratios upwards of 5:1 to 20:1.

Mitigation should take place within the same watershed as the project impacts, and preferably within the documented range of wood turtles. For example, the proposed Cedar Run and Licking Run mitigation sites (Final EIS, pages 6-21 and 6-22, respectively) are not within the range of wood turtles. However, the purchase of wetland credits (as opposed to stream credits) from these mitigation banks is acceptable to the Department of Game and Inland Fisheries. Mitigation sites should include adequate riparian and upland buffers, as discussed above (item 3(c)). Individual mitigation projects should be identified on the ground prior to activities giving rise to impacts.

3

4

(e) *Mitigation Measures and Applicable Permitting Requirements.* The Virginia Water Protection Permit Regulation, 9 VAC 25-210-80.1.k.4(g), states:

Applicants proposing off-site compensatory mitigation, including purchase or use of mitigation bank credits, or contribution to an in-lieu fee fund[,] shall first discuss the feasibility of on-site compensatory mitigation.

In addition, the Regulation states, at 9 VAC 25-210-115.B.3.:



Generally, preference shall be given in the following sequence: restoration, creation, mitigation banking, in-lieu fee fund.

Given the extensive nature of the proposed impacts, it would be appropriate for the project proponents to search in the immediate vicinity of the project for restoration opportunities to replace the lost functions and values directly within the sub-watersheds being affected. The fact that the Airport has already secured wetland credits at wetland banks does not affect DEQ's decision regarding the compensation ratio; nor are wetland credits the most ecologically preferable method of compensation.

5a

The foregoing analysis pertains to stream mitigation as well as to wetland mitigation, because on- or off-site stream restoration is preferable to mitigation bank purchases.

Loudoun County indicates that mitigation banks have been established in Prince William and Fauquier Counties, and that these account for 200 of the 273 acres of required wetland mitigation (see Final EIS, pages 6-9 and 6-10, section 6.2.4). Loudoun County recommends that the FAA use wetland banks and stream restoration projects within Loudoun and Fairfax Counties for all remaining mitigation requirements, commensurate with Advisory Circular 150/5200-33, "Hazardous Wildlife Attractants On or Near Airports." This is in accordance with the views of the Northern Virginia Regional Commission and the Department of Game and Inland Fisheries that wetland mitigation should take place in the watersheds where impacts will occur.

5b

**4. Solid and Hazardous Waste Management.** According to DEQ's Waste Division, the Final EIS addressed both solid waste issues and sites and hazardous waste issues and sites, and stated (page 5-209) that a search of waste-related data bases was included. DEQ's Waste Division did a cursory review of its data files.

**(a) Findings.** DEQ's Waste Division found that the airport project area has been made subject to RCRA (Resource Conservation and Recovery Act) Corrective Action by the Environmental Protection Agency (EPA). The project site was ranked by EPA in 1996 as a medium-priority site, using the National Corrective Action Prioritization System (NCAPS). EPA is working with the Airport to address a release during the upgrade of the above-ground fuel storage tank farm (hydrant system).

**(b) Data File Search Findings.** In addition, the data file search indicated that the following small-quantity generators of hazardous waste are in the vicinity of the project (noted by EPA identification number and name):

- VAR000505800, Transportation Security Administration
- VAR000006585, Thomas De La Rue, Inc.
- VAD988202859, Nextel Aviation, Inc.
- VAR000014670, German Armed Force Command
- VAR000014662, Dulles Airport Marriott
- VAR0000010579, Atlantic Coast Airlines
- VAR000504050, DEA Special Testing and Research Lab
- VAR000008474, Airline Tariff Publishing Co.
- VAR000006726, Exxon Co. USA No. 20338

The following web site may be helpful in locating additional information for these identification numbers:

- [http://www.epa.gov/echo/search\\_by\\_permit.html](http://www.epa.gov/echo/search_by_permit.html).

*(c) Corrective Action and Solid Waste Management Units.* Since the RCRA Corrective Action requirement applies to the entire project site, the proposed project may be affected by Corrective Action requirements. There is no record of a completed RCRA Facility Assessment identifying solid waste management units (SWMUs) at the Airport, but several SWMUs have been identified as a result of the NCAPS ranking (section 4(a), above). The Final EIS states that the proposed activities will not take place in the vicinity of identified SWMUs (page 5-211, section 5.20.3.2) and supports this determination through illustrations (pages 5-213 and 5-214, Figures 5.20.3-1 and 5.20.3-2) of the juxtaposition of proposed activities with the known SWMUs. With the exception of the former Fire Training Facility, which was "clean-closed" in accordance with the Virginia Hazardous Waste Management Regulations, the proposed construction does not appear to affect any known areas subject to the Corrective Action requirement.

DEQ's Waste Division recommends, in any case, that the project proponents contact EPA before initiating any land disturbance activities to discuss Corrective Action obligations. See "Regulatory and Coordination Needs," item 2(c), below.

*(d) Pollution Prevention.* DEQ encourages the project proponents to implement pollution prevention principles, including the reduction of wastes at the source, re-use of materials, and recycling of waste materials. Additional pollution prevention tips appeared in our Comments on the Draft EIS (DEQ-05-009F, dated March 3, 2005, pages 15-16, item 12).

(c) *Hazardous Wastes.* Hazardous waste generation should be minimized, and hazardous materials handled appropriately. See "Regulatory and Coordination Needs," item 2, below.

5. *Historic Structures and Archaeological Resources.* The Department of Historic Resources is already consulting with FAA and MWAA on this project, pursuant to the National Historic Preservation Act, section 106, and its implementing regulation at 36 CFR Part 800. The Department anticipates that the project proponents will continue consulting in order to develop a Memorandum of Agreement. See "Regulatory and Coordination Needs," item 4, below.

Loudoun County requested, in commenting on the Draft EIS, that it be included as a consulting party in the section 106 process. The County appreciates its inclusion as a concurring party in the memorandum of agreement under development.

6. *Erosion and Sediment Control; Stormwater Management.* The Department of Conservation and Recreation recommends strict adherence to erosion and sediment control measures in order to minimize adverse impacts to the aquatic ecosystem during all land-disturbing activities.

(a) *Erosion and Sediment Control.* Because the land disturbance associated with the project will exceed 2,500 square feet, an Erosion and Sediment Control Plan is required under the Virginia Erosion and Sediment Control Law (*Virginia Code* sections 10.1-560 et seq.) and the Virginia Erosion and Sediment Control Regulations (4 VAC 50-30 et seq.). The Plan should be prepared in accordance with the *Virginia Erosion and Sediment Control Handbook* and must also comply with the requirements of Chapter 104 of the *Fairfax County Code*. This requirement applies to the portions of the project that are in Fairfax County. ]

6

Fairfax County is one of the localities in which the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.1-2100 et seq.) applies, and its Resource Management Area designation pursuant to that law (see also item 10, below) is countywide. See "Regulatory and Coordination Needs," item 5(a), below.

Loudoun County notes that the Final EIS commits the Airport to state requirements for erosion and sediment control (page 6-7, section 6.2.2.7). However, the County states that under state law (*Virginia Code* section 10.1-564), the Erosion and Sediment Control Plan for activities within a locality with

more stringent regulations than the state program must be consistent with the requirements of the local program. Accordingly, some aspects of the development will be controlled by local requirements for erosion and sediment control. The Final EIS acknowledges this stipulation, stating that all "applicable local, state, and federal environmental construction controls should be incorporated into the specifications and construction plans necessary for the proposed project" (page 6-16, section 6.2.6). In keeping with these stricter standards, the County recommends two measures attributable to the Loudoun County Sanitation Authority's Goose Creek Source Water Protection Program (December 2003):

- Doubling the sediment trap/basin standard of 134 cubic yards per acre (*Virginia Erosion and Sediment Control Handbook*, Minimum Standard 6); and
- Verifying adequate channel conditions downstream of sediment traps and basins using the 1-year, 24-hour storm instead of the 2-year, 24-hour storm (*Handbook*, Minimum Standard 19).

(b) *Stormwater Management*. The project must also adhere to the Fairfax County Chesapeake Bay Preservation Ordinance, section 118-3-2(f) and meet criteria consistent with the water quality protection provisions of the Virginia Stormwater Management Regulations (4 VAC 3-20 *et seq.*; see 4 VAC 3-20-71). To verify compliance, the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance, which administers the water quality protection provisions, must review the site plan for the project. See "Regulatory and Coordination Needs," item 5(b), below.

Stormwater controls for the project should be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape, according to the Department of Game and Inland Fisheries. This should include, but not be limited to, utilizing bio-retention areas and minimizing the use of curb-and-gutter in favor of grasses swales.

The Department of Game and Inland Fisheries generally does not support proposals to mitigate wetland impacts through the construction of stormwater management ponds; nor does it support the creation of in-stream stormwater management ponds (see also item 3(a), above).

The proponents must adhere to *post-development* water quality requirements in the Virginia Stormwater Management Regulations in order to address post-construction stormwater quality management, according to the

Northern Virginia Regional Commission. The Commission commends the proponents for proposing to incorporate principles of low-impact development into the stormwater plan for the site. The Commission recommends, however, that special measures should be taken to ensure that de-icing fluid will not be transported by stormwater to receiving waters, in either Loudoun or Fairfax County.

(c) *Stormwater Permits.* A separate requirement for stormwater management permitting applies to projects involving land disturbance of one acre or more (or, in Chesapeake Bay Preservation Areas, projects involving land disturbance of at least 2,500 feet and under one acre). See "Regulatory and Coordination Needs," item 6, below.

7. *Wildlife Resources.* The responsibilities of the Department of Game and Inland Fisheries were presented in our Comments on the Draft EIS (DEQ-05-009F, dated March 3, 2005, pages 12-13, item 7). That Department reiterates, and adds to its earlier comments, as follows.

(a) *Wood Turtle and its Protection.* One of the streams that would be affected by this project is Cub Run. The sub-basin of Cub Run would receive 288 acres of impervious cover, according to the Final EIS (page 5-138, section 5.6.3.2). Because of the presence of the wood turtle, listed by the Commonwealth as a threatened species, Cub Run is designated by the Department of Game and Inland Fisheries as a Threatened and Endangered Species Water. Provided that Best Management Practices are implemented for any work along wetlands or streams, the project is not likely to give rise to significant adverse effects upon the wood turtle. However, because of the potential of encounters of wood turtles, the Department of Game and Inland Fisheries recommends that all contractors be trained in identification, natural history, and protection of wood turtles before the project begins. Guidance follows.

(i) *Encountering wood turtles.* If any wood turtles are encountered and found to be in jeopardy during the project, then the project proponents should:

- Immediately remove the turtle from the project site;
- Return the turtle safely to suitable habitat in Cub Run; and
- Report the matter to the Department of Game and Inland Fisheries (telephone (804) 367-8999).

(ii) *Wood turtle information.* Information on the wood turtle is on the Department of Game and Inland Fisheries' web site,

- <http://www.dgif.virginia.gov/wildlife/species/display.asp?id=030062>.

In addition, an information sheet should include the following text:

The wood turtle is a state-listed threatened species that may be found in or near the project area.

Description: A medium-sized, semi-terrestrial turtle, adults are 6-8 inches long. The dull brown upper shell is very rough; each section of the shell is composed of growth rings that form an irregular pyramid. The bottom shell is yellow with black blotches. The turtle has a black head and dark brown extremities. The yellow to burnt-orange skin on the neck and in the leg sockets is a distinguishing characteristic.

Protecting the wood turtle: If one of these turtles is found within the project area, it should be carefully removed to safety in suitable habitat (a run or deep pool, with sandy or muddy bottom and submerged roots, branches, or logs) within Cub Run.

Violation: It is a violation of Virginia law to harm, or keep for personal possession, a wood turtle.

Questions: If you have any questions concerning this species, call the Virginia Department of Game and Inland Fisheries at (804) 367-8999, or check our web site, <http://www.dgif.virginia.gov/wildlife/species/display.asp?id=030062>.

*(b) Sandpiper and its Protection.* The upland sandpiper, a bird listed by the Commonwealth as a threatened species, is documented as occurring in the project area. Upland sandpiper nesting habitat consists of areas containing medium to tall grasses. The species will also use plowed fields, areas of short grasses, heavily grazed pastures, and sod farms. The species has been observed at the Airport during breeding season; but the Department of Game and Inland Fisheries states its understanding that the bird was not observed during specific surveys by MWAA in 2001, 2002, and 2003.

The Final EIS states that available habitat at the Airport for the upland sandpiper is used primarily during migration (page 4-122). Because migration habitat is an important component of habitat for the species, the Department of Game and Inland Fisheries recommends that appropriate steps be taken to enhance areas considered suitable for the species. This includes maintaining grass height between 3 and 24 inches tall and not mowing between April 1 and July 31.

(c) *Buffers between Developed Areas and Habitat Areas.* See item 3(c), above for recommended buffers.

(d) *Habitat Restoration.* [The Department of Game and Inland Fisheries (DGIF) recommends that the proponents provide habitat restoration and enhancement to offset the negative impacts of the project to migratory birds, other fish and wildlife resources, and wildlife-related recreation.] In its recommendation, DGIF concurs with the U.S. Fish and Wildlife Service.

7a

The Final EIS states (page 5-159, section 5.9.4):

Impacts to upland biotic communities (...) are less significant at the regional level, where sustainable amounts of natural areas are found.

[The Final EIS also indicates that land acquisition for either creation or conservation of upland forests would likely be considered unreasonable because of availability and cost. However, considering the rate of land development in Northern Virginia, DGIF disagrees with the proposition that sustainable amounts of natural areas exist.] In light of the impacts proposed, DGIF believes that habitat replacement is reasonable and practical. As with wetland mitigation sites, upland mitigation sites do not have to be in immediate proximity to the Airport. DGIF recommends an analysis of land cost and availability in the region surrounding the Airport.

7B

8. *Forest and Tree Protection.* See our response to the Draft EIS (DEQ-05-009F, dated March 3, 2005, pages 13-14, item 8).

9. *Mineral Resources.* According to the Department of Mines, Minerals, and Energy, the project will not affect the mineral resources of the area. New construction, however, may encounter igneous rock, which would require additional drilling or excavation effort.

The Final EIS did not address soils or geology information, according to the Department (Wilkes/Ellis, 9/9/05). For additional information on these subjects, the proponents may contact the Department of Mines, Minerals, and Energy (Gerry Wilkes, telephone (434) 951-6364).

10. *Chesapeake Bay Preservation Areas.* Projects in Fairfax County are subject to the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.1-2100 *et seq.*) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 *et seq.*), whereas projects in Loudoun County are not.

The proposed Build Alternative 3 affects both Resource Protection Areas and Resource Management Areas (the two classifications of Chesapeake Bay Preservation Areas) in Fairfax County. It is subject, therefore, to the general performance criteria (9 VAC 10-20-120) and the development criteria for Resource Protection Areas (9 VAC 10-20-130). As the Northern Virginia Regional Commission states, the project is also subject to the stormwater quality requirements of the Fairfax County ordinance.

*11. Natural Area Preserves.* According to the Department of Conservation and Recreation, there are no State Natural Area Preserves in the project vicinity.

*12. Road Transportation.* The proposed project is unlikely to give rise to direct physical impacts upon planned highway improvements, because the construction will take place on airport property, according to the Virginia Department of Transportation (VDOT).

VDOT expects increased traffic on roads surrounding the airport, particularly on State Route 28 and on the Dulles Airport Access Road. The traffic growth is likely to occur regardless of whether the new runways and associated facilities are built. This growth has already been considered in regional transportation network modeling by the National Capital Transportation Planning Board (the local metropolitan planning organization) as part of its air quality conformity determination. VDOT confirms the statements in the Final EIS on transportation conformity (page 5-134, section 5.5.10) and the surface transportation overview (page 5-215 and 5-216, section 5.21.1).

Road projects that are planned or under construction will mitigate the impacts of increased traffic, according to VDOT. These include widening of Route 28 from 6 to 8 lanes, and the widening of State Route 606 from 2 lanes to 4 lanes.

*13. Local and Regional Comments.*

*(a) Loudoun County.* Loudoun County concurs with the selection of Build Alternative 3. This alternative would promote County policies, allow the Airport to achieve a 5-runway configuration, and minimize environmental impacts compared with Build Alternative 4. The County asks that FAA and MWAA continue coordination with the County regarding mitigation of environmental impacts, particularly as these relate to water quality (see item 3(e), above), stormwater runoff (item 6(a)), construction mitigation, and archaeological investigations (item 5).



(b) *Northern Virginia Regional Commission.* [The Northern Virginia Regional Commission recommends that an assessment of long-term cumulative impacts should include the development planned for the Broad Run and Cub Run/Bull Run watersheds. This is important in light of a current proposal for a 123-acre university campus and 15,000 houses on land immediately west of the Airport, in the Broad Run watershed, and within or near the 60 DNL noise contour.]

8

The Commission recommends that the proponents evaluate opportunities to preserve, via purchases of land or easement, existing wildlife corridors that may be lost to future development. A number of such opportunities exist within five miles of the Airport.

#### Federal Consistency under the Coastal Zone Management Act

The Final EIS includes a discussion of consistency of the proposed project with the enforceable policies of the Virginia Coastal Resources Management Program (pages 5-181 through 5-183, section 5.13). As indicated in our response to the Draft EIS (DEQ March 3, 2005 letter, pages 16-17), the Commonwealth concurred with the determination by the FAA that the proposed project is consistent with the Virginia Coastal Resources Management Program, provided that the Metropolitan Washington Airports Authority and its contractors comply with all applicable requirements. This concurrence remains effective, and the requirements continue to apply.

#### Regulatory and Coordination Needs

1. *Road Transportation.* Any work with the potential to affect nearby roads should be coordinated with the appropriate Virginia Department of Transportation Residency Office, depending on which County's roads are affected:

Fairfax County: Fairfax Residency, telephone (703) 383-8368

Loudoun County: Leesburg Residency, telephone (703) 737-2000).

2. *Solid and Hazardous Waste Management.*

(a) *Contamination.* Any soil suspected of contamination, or hazardous wastes that are generated by the project, must be tested and disposed of in accordance with applicable federal and state laws and regulations. The applicable laws and regulations include, but are not limited to, the Virginia Waste Management Act (*Virginia Code* sections 10.1-1400 et seq.), the Virginia

Hazardous Waste Management Regulations (9 VAC 20-60), the Virginia Solid Waste Management Regulations (9 VAC 20-80) as well as federal requirements such as the Resources Conservation and Recovery Act (42 U.S.C. sections 6901 et seq.). (See attached Waste Division memo, Brockman to Ellis, dated September 7, 2005 for additional citations.)

*(b) Lead-based Paint and Asbestos.* In the event of demolition, removal, or renovation of structures, the proponents should check the structures in question for the presence of lead-based paint and asbestos. If lead-based paint is found, the proponents must follow the provisions of 9 VAC 20-60-261 as well as the other applicable rules in the Virginia Hazardous Waste Management Regulations. Similarly, if asbestos-containing materials are found, the project proponents must follow the provisions of 9 VAC 20-80-640 as well as the other applicable provisions in the Virginia Solid Waste Management Regulations.

*(c) RCRA Corrective Action.* As indicated above ("Environmental Impacts and Mitigation," item 4(c)), DEQ's Waste Division recommends that the proponents contact EPA Region III (Robert Greaves, telephone (215) 814-3423) to discuss Corrective Action obligations prior to undertaking any land disturbance for this project.

*3. Water and Wetland Regulation.* As indicated above, the project is subject to the Virginia Water Protection Permit requirement. MWAA and FAA should continue consultations with DEQ's Northern Virginia Regional Office (Joan Crowther, telephone (703) 583-3828) and with the Army Corps of Engineers, Norfolk District (Bob Hume, telephone (757) 201-7657) in this regard. The Water Protection Permit program is an enforceable policy of the Virginia Coastal Zone Management Act, and the project must be designed, constructed, and operated in accordance with the requirements of this permit, as well as with other regulatory requirements.

*4. Historic Resources.* To ensure compliance with section 106 of the National Historic Preservation Act, the project proponents should continue their consultation with the Department of Historic Resources (Marc Holma, telephone (804) 367-2323, extension 114).

*5. Erosion and Sediment Control Plan; Stormwater Management Plan.*

*(a) Erosion and Sediment Control Plan.* For guidance on preparing and implementing erosion and sediment control plans (see "Environmental Impacts and Mitigation," item 6(a), above), the proponents may contact the Department of

Mr. Joseph Delia  
Page 17

Conservation and Recreation's Potomac Watershed Office in Warrenton (Gary Switzer, telephone (540) 351-1589).

(b) *Stormwater Management Plan*. As indicated above, site plan review by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance is required for this project. Accordingly, the proponents must prepare a site plan including stormwater management details and water quality calculations, and submit it to the Division at the following address:

Department of Conservation and Recreation  
Division of Chesapeake Bay Local Assistance  
Attn: Ms. Alice Baird  
Monroe Building, 17th floor  
101 North 14th Street  
Richmond, Virginia 23219.

The water quality calculations should be developed in accordance with the procedures in the *Virginia Stormwater Management Handbook*, Appendix 5B; the *Handbook* is available from the Division. These procedures will aid in determining the exact pollutant removal requirement and the adequacy of the stormwater management Best Management Practices. Questions may be addressed to the Division (Alice Baird, telephone (804) 371-2307).

6. *VPDES Stormwater General Permit for Construction*. Projects disturbing one acre or more of land area are also subject to the requirement for a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit for Construction Activities. (In Chesapeake Bay Preservation Areas, this requirement applies to land disturbance of 2,500 square feet or more and less than one acre, as well.) The proponents should contact the Department of Conservation and Recreation's Division of Soil and Water Conservation (Eric Capps, telephone (804) 786-3957) to inquire about fulfilling this requirement.

Thank you for the opportunity to comment.

Sincerely,



Ellie L. Irons  
Program Manager  
Office of Environmental Impact Review

Mr. Joseph Delia  
Page 18

Enclosures

cc: Andrew K. Zadnik, DGIF  
Keith R. Tignor, VDACS  
Scott Bedwell, DCR  
Steven Pellei, VDH  
Allen R. Brockman, DEQ-Waste  
Kotur S. Narasimhan, DEQ-Air  
Bettina Rayfield, DEQ-Water  
John D. Bowden, DEQ-NVRO  
Nicholas M. Nies, VDOT  
Tony Watkinson, MRC  
Marc Holma, DHR  
Gerald P. Wilkes, DMME  
J. Michael Foreman, DOF  
Katherine K. Mull, NVRC  
Noel F. Kaplan, Fairfax County (or Pam Nee)  
Julie Pastor, Loudoun County  
J. Robert Hume, ACOE

## Ellis, Charles

---

**From:** Andrew Zadnik [Andrew.Zadnik@dgif.virginia.gov]  
**Sent:** Wednesday, August 24, 2005 10:01 AM  
**To:** Ellis, Charles; Beasley, Trisha  
**Cc:** Rene.Hypes@dcr.virginia.gov; scott.bedwell@dcr.virginia.gov;  
ProjectReview.Richmond\_PO.DGIF@dgif.virginia.gov; kim\_marbain@fws.gov  
**Subject:** 05-0955\_05-215F\_ESSLOG 18864\_Dulles\_new runways, terminals, etc.

Charlie and Trisha,

I thought since I have both the JPA and Final EIS for this project, I would put together one set of comments. Please let me know if you need any clarification. Thanks.

We have reviewed the subject project and offer the following comments and recommendations. This project involves the construction of 2 new runways, associated taxiways, navigation aids, concourse development, relocation of NOAA/NWS facilities, and extension of the Automated People Mover at Washington Dulles International Airport (IAD), Fairfax and Loudoun Counties. Environmental impacts will include the permanent loss of at least 1,600 acres of uplands, 71 ac PFO, 0.75 ac PSS, 67 ac PEM, and 2 ac POW wetlands, and between 51,000 and 60,000 lf of streams. Also, 47 ac of PFO and PSS wetland will be converted to PEM.

One of the streams to be impacted is Cub Run, a designated Threatened and Endangered Species Water due to the presence of the State Threatened wood turtle. However, in accordance with a March 25, 2004 email from former DGIF biologist Don Schwab, we do not anticipate significant adverse impacts upon this species as long as BMPs are implemented for any work along wetlands and streams. Nevertheless, due to the potential to encounter wood turtles in upland, riparian, and riverine areas, we recommend that, prior to the start of this project, all contractors are trained in the identification and basic natural history of wood turtles. If any wood turtles are encountered and in jeopardy during the development or construction of this project, immediately remove them from the project site and return them safely to suitable habitat in a perennial reach of Cub Run. Any relocations should be coordinated with DGIF Herpetologist John Kleopfer (757) 253-4180. An appropriate information sheet to distribute to contractors could include the following text below a photo of a wood turtle: "The wood turtle is a State Threatened species that may be found in or near the project area. Description: A medium sized semi-terrestrial turtle, adults are 6-8 inches long. The dull brown upper shell is very rough; each section of the shell is composed of growth rings that form an irregular pyramid. The bottom shell is yellow with black blotches. It has a black head and dark brown extremities. The yellow to burnt orange skin on the neck and in the leg sockets is a distinguishing characteristic. If one of these turtles is found within the project area, it should be carefully removed to safety in suitable habitat (a run or deep pool with sandy or muddy bottom and submerged roots, branches, or logs) within Cub Run. It is a violation of Virginia law to harm or keep for personal possession a wood turtle. If you have any questions concerning this species, call the Virginia Department of Game and Inland Fisheries at 804-367-8999 or check our website at <http://www.dgif.virginia.gov/wildlife/species/display.asp?id=030062>."

Our records indicate the documented occurrence of the State Threatened upland sandpiper in the project area. Upland sandpiper nesting habitat in Virginia consists of areas containing medium to tall grasses. This species also will use plowed fields, areas of short grasses, heavily grazed pastures, and sod farms. This species has been observed during the breeding season at Dulles. However, we understand that this species was not observed during specific surveys conducted by the Metropolitan Washington Airports Authority in 2001, 2002, and 2003. The Final EIS concludes that available habitat at Dulles is used primarily during migration. As this is an important component of upland sandpiper habitat requirements, we recommend that appropriate land management be implemented to enhance those areas considered suitable for the species. This includes maintaining grass height between 3 and 24 inches tall and not mowing between April 1 and July 31. Due to the few numbers of these birds that would likely utilize the facility and the particular behavior of this species, the overall hazard to aircraft should be low. As such, incorporation of this plan into the overall habitat management plan at IAD (Page 4-108 of the Final EIS) appears to be reasonable.

We recommend that the applicant avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization effort could include relocating stream channels as opposed to channelizing or filling, using a natural stream channel design and wooded buffers, and incorporating the natural stream channel with wooded buffers in the development plan. We recommend maintaining undisturbed wooded buffers of at least 100-200 feet in-width around all remaining on-site wetlands, 100 feet to both sides of intermittent streams, and, due to the potential to support wood turtles, at least 300 feet to both sides of perennial streams. Increased buffers will protect water quality and aquatic species by filtering contaminants and sediment, and provide some compensation for the loss of riparian wildlife habitat. Buffers of less than 100 feet will result in a significant loss of wildlife habitat value for those wetlands or streams, and in our opinion, should be compensated. We recommend providing compensatory mitigation for unavoidable impacts to forested wetlands at a minimum ratio of 2:1, scrub/shrub wetlands at a minimum ratio of 1.5:1, emergent wetlands at a minimum ratio of 1:1, open-water wetlands at a minimum ratio of 1:1, and converted PFO and PSS wetlands at a minimum ratio of 1:1. We recommend that stream impacts associated with this project be mitigated at a ratio of at least 1:1 based on full restoration of a similarly functional stream. Stream enhancement or preservation-only activities should require ratios upwards of 5-20:1. Mitigation for this project should occur within the same watershed as the impacts. Preferably, stream mitigation sites should be within the documented range of wood turtles. The proposed Licking Run and Cedar Run mitigation banks are not within the range of this species. However, the purchase of wetland credits (as opposed to stream credits) from these banks is acceptable. Mitigation sites should include adequate riparian/upland buffers, as described above. Individual mitigation projects should be identified on the ground prior to impacts.

In concurrence with the U. S. Fish and Wildlife Service, we recommend providing habitat restoration/enhancement to offset the negative impacts to migratory birds, other fish and wildlife resources, and wildlife-related recreation that will result from this project. Part of this mitigation package should include a management plan for grassland wildlife, including upland sandpipers (see above) and marsh birds. The Final EIS for this project states that "impacts to upland biotic communities are less significant at the regional level, where sustainable amounts of natural areas are found" (Page 5-159). Considering the rate of land development in this region of Virginia, we disagree that sustainable amounts of natural areas exist. Also, according to the Final EIS, land acquisition for either creation or conservation of upland forests would likely be considered unreasonable due to availability and cost. Considering the impacts proposed, we believe habitat replacement is reasonable and practical. As with wetland mitigation sites, upland mitigation sites do not have to be in immediate proximity to IAD. We recommend an analysis of land cost and availability in the region surrounding IAD.

We recommend conducting any in-stream activities during low- or no-flow conditions, using non-erodible cofferdams to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend installation of floodplain culverts to carry bankfull discharges.

We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. We generally do not support proposals to mitigate wetland impacts through the construction of stormwater management ponds, nor do we support the creation of in-stream stormwater management ponds.

#### Coastal Consistency Determination:

The significant stream impacts associated with this project have the potential to result in increased amounts of sediment and pollutants entering Chesapeake Bay. As such, this may have a negative impact upon finfish resources and recreational fishing in state waters. Therefore, we emphasize the need for this project to maintain the overall hydrographic condition of the site prior to the change in landscape (please see above).

Also, the stream mitigation package for this project should include provisions for restoring or enhancing fisheries resources and recreational fishing opportunities. Strict adherence to these measures will result in this project being consistent, to the fullest extent possible, with the Fisheries Section of the VA Coastal Resources Management Program.

Thank you for the opportunity to comment on this project. Please contact me if I can be of further assistance.

Andrew K. Zadnik  
Environmental Services Section Biologist  
Department of Game and Inland Fisheries  
4010 West Broad Street  
Richmond, VA 23230

(804) 367-2733  
(804) 367-2427 (fax)

**Ellis, Charles**

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**From:** Rayfield, Bettina  
**Sent:** Thursday, September 15, 2005 9:09 AM  
**To:** Harold, Catherine; Ellis, Charles  
**Subject:** RE: Comments on FAA Final EIS on Dulles Airport new runways, etc. (DEQ-05-215F)

Charlie:

Our regulations do require certain mitigation ratios:

For wetlands: Forested 2:1 (compensation to impact); Scrub shrub 1.5:1; emergent 1:1. The ratios can be altered based on the permit writer professional judgment but this is what they typically are. Remember that these are the ratios for in-kind restoration (preservation will be higher).

For streams, we do not have set ratios but are working on a stream manual. This would be left to permit writer discretion and would be based on stream quality and mitigation plan.

I hope this answers your question.

Bettina Rayfield  
Virginia Water Protection Program  
Department of Environmental Quality  
629 E. Main Street  
PO Box 10009  
Richmond, Virginia 23240-0009  
804-698-4204  
Fax 804-698-4347

-----Original Message-----

**From:** Harold, Catherine  
**Sent:** Wednesday, September 14, 2005 8:37 AM  
**To:** Ellis, Charles; Rayfield, Bettina  
**Subject:** RE: Comments on FAA Final EIS on Dulles Airport new runways, etc. (DEQ-05-215F)

Tina – can you answer back to Charlie. Charlie – DGIF frequently makes recommendations that are beyond what we can require. We require what we can and say thank you very much for the others. We can't tell them not to make those cmts. It's part of their latest strategy to push for increase protections where ever they can.

Catherine M. Harold, PWS, Manager  
Office of Wetlands & Water Protection  
VA Department of Environmental Quality  
629 E. Main Street  
P.O. Box 10009  
Richmond, VA 23240  
(804) 698-4047  
FAX (804) 698-4032

-----Original Message-----

**From:** Ellis, Charles  
**Sent:** Tuesday, September 13, 2005 3:31 PM  
**To:** Harold, Catherine; Rayfield, Bettina  
**Subject:** RE: Comments on FAA Final EIS on Dulles Airport new runways, etc. (DEQ-05-215F)

Catherine, Tina – Tina came through on the comments last week, but I do have one question (and a few hours, if that, to answer it!).

The question is: do the Water regs, or guidelines, state wetland mitigation ratios that are to be required in a permit



or used as a basis for staff as it develops a requirement in a permit? The DGIF recommended several (i.e., loss of forested wetlands, 2 for 1 mitigation, and so on), and I would like to know if they match your rules or guidance. Can you help, or rattle stuff off, or tell me where to find it? Much obliged.

Charlie

-----Original Message-----

**From:** Harold,Catherine

**Sent:** Tuesday, September 13, 2005 10:48 AM

**To:** Rayfield,Bettina

**Cc:** Ellis,Charles

**Subject:** FW: Comments on FAA Final EIS on Dulles Airport new runways, etc. (DEQ-05-215F)

You sent these a few wks ago didn't you?

Catherine M. Harold, PWS, Manager  
Office of Wetlands & Water Protection  
VA Department of Environmental Quality  
629 E. Main Street  
P.O. Box 10009  
Richmond, VA 23240  
(804) 698-4047  
FAX (804) 698-4032

-----Original Message-----

**From:** Ellis,Charles

**Sent:** Wednesday, September 07, 2005 10:10 AM

**To:** Brockman,Allen; Narasimhan,Kotur; Harold,Catherine; 'Keith Tignor'; 'Scott Bedwell'; 'Steven.pellei@vdh.virginia.gov'; 'Tony Watkinson'; 'gerald.wilkes@geology.virginia.gov'; 'Foreman, Mike'; 'info@novaregion.org'; 'Nee, Pamela'; 'dop@loudoun.gov'

**Cc:** Bowden,John

**Subject:** Comments on FAA Final EIS on Dulles Airport new runways, etc. (DEQ-05-215F)

Everybody – I need your comments, if any, on this Final EIS. Sorry to send the reminder two days before my internal deadline, but next week's schedule makes it necessary for me to move faster on this than I anticipated when I set the deadline.

Charlie Ellis  
DEQ, Office of Environmental Review

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

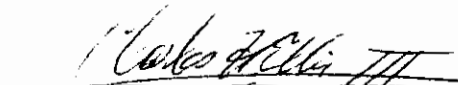
MR. CHARLES H. ELLIS III  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF ENVIRONMENTAL IMPACT REVIEW  
629 EAST MAIN STREET, SIXTH FLOOR  
RICHMOND, VA 23219  
FAX #804/698-4319



RECEIVED

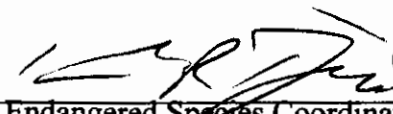
SEP 08 2005

DEQ-Office of Environmental  
Impact Review

  
CHARLES H. ELLIS III  
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

Statements in the project document concerning endangered species were reviewed and compared to available information. No additional comments are necessary in reference to endangered plant and insect species regarding this project.

(signed)  (Keith R. Tignor) (date) September 6, 2005  
\_\_\_\_\_  
Endangered Species Coordinator  
(title) VDACS, Office of Plant and Pest Service  
(agency) \_\_\_\_\_



**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF CONSERVATION AND RECREATION**

217 Governor Street  
Richmond, Virginia 23219-2010  
Telephone (804) 786-7951 FAX (804) 371-2674 TDD (804) 786-2121

**MEMORANDUM**

**DATE:** September 8, 2005

**TO:** Mr. Charles H. Ellis, III  
Department of Environmental Quality  
Office of Environmental Impact Review  
629 East Main Street, Sixth Floor  
Richmond, Va. 23219  
[chellis@deq.state.va.us](mailto:chellis@deq.state.va.us)  
(804) 698-4488

**FROM:** Robert Munson, Planning Bureau Manager  
Virginia Department of Conservation and Recreation

**SUBJECT:** DEQ-05-215F: New Runways, Terminal Facilities and Related Facilities at Dulles International Airport

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Cub Run Stream Conservation Unit (SCU) is in the vicinity of the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. Stream Conservation Units are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Cub Run SCU has been ranked as a B3 conservation site, which indicates it is of high significance.

The wood turtle (*Glyptemys insculpta*, G4/S2/NL/LT) is associated with this SCU. The wood turtle inhabits forested floodplains and nearby fields, wet meadows, and farmlands (Mitchell, 1994). As this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994). Please note that the wood turtle is classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

DCR concurs with the Virginia Department of Game and Inland Fisheries recommendations for minimizing impacts to this species, by moving any of the turtles jeopardized by the construction to suitable habitat in Cub Run. DCR recommends coordination with VDGIF to ensure compliance with protected species legislation.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR also recommends the implementation of and strict adherence to erosion and sediment control measures during all land disturbing activities.

Additionally, DCR recommends avoiding the documented occurrences of marsh hedgenettle (*Stachys pilsoa*, G5T4/S1/NL/NL) as stated in the Draft Environmental Impact Statement (1/2005) on page 5-115.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, which may contain information not documented in this letter. Their database may be accessed from [http://www.dgif.virginia.gov/wildlife/info\\_map/index.html](http://www.dgif.virginia.gov/wildlife/info_map/index.html), or contact Shirl Dressler at (804) 367-6913.

DCR's Division of Chesapeake Bay Local Assistance has reviewed the Draft Environmental Impact Statement for the New Runways, Terminal Facilities & Related Facilities at Washington Dulles International Airport as requested. Fairfax County is located in Tidewater Virginia and falls under the *Chesapeake Bay Preservation Act & Regulations* (the Regulations) but Loudoun County does not, therefore, the portion of the project in Loudoun County is not subject to the Regulations. The proposed project Build Alternative 3 impacts both Resource Protection Areas (RPA) and Resource Management Areas (RMA) and, as such, is subject to the *Chesapeake Bay Preservation Act & Regulations*. In addition we have the following comments:

1. All development within the Chesapeake Bay Preservation Area (CBPA) is subject to §9 VAC 10-20-120 through § 9 VAC 10-20-130 as implemented in Fairfax County's Chesapeake Bay Preservation Ordinance Chapter 118 Article 3, General Performance Criteria for Resource Management Areas & Resource Protections Areas.

2. The project exceeds 2,500 square feet of land disturbance; therefore, an erosion and sediment control plan is required prior to land disturbance in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. The erosion and sediment control plan must comply with the requirements of Chapter 104 of the Fairfax County Code.

The project must adhere to the Fairfax County requirements for stormwater management within Chesapeake Bay Preservation Areas as outlined in Sec.118-3-2 (f) of the Fairfax County Chesapeake Bay Preservation Ordinance. Stormwater management criteria consistent with water quality protection provisions (§4 VAC 3-20-71 et seq.) of the *Virginia Stormwater Management Regulations* (§ 4 VAC 3-20) shall be satisfied. In order to fully verify compliance, Department of Conservation and Recreation, Division of Chesapeake Bay Local Assistance review of the site plan is necessary. This site plan should include stormwater management details – including water quality calculations (see the calculation procedures in Appendix 5B of the Virginia Stormwater Management Handbook to determine the exact pollutant removal requirement and adequacy of the proposed stormwater management BMP.)

Thank you for the opportunity to comment on this project.

Sincerely,



Robert S. Munson  
Planning Bureau Manager

cc: Andy Zadnik, VDGIF



# COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.  
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Street address: 629 East Main Street, Richmond, Virginia 23219  
Mailing address: P. O. Box 10009, Richmond, Virginia 23240  
Fax (804) 698-4500 TDD (804) 698-4021  
www.deq.virginia.gov

Robert G. Burnley  
Director

(804) 698-4000  
1-800-592-5482

## MEMORANDUM

RECEIVED

**TO:** Charles H. Ellis, III, Environmental Program Planner  
**FROM:** *ARB* Allen Brockman, Waste Division Environmental Review Coordinator  
**DATE:** September 7, 2005  
**COPIES:** Sanjay Thirunagari, Waste Division Environmental Review Manager; Leslie Romanchik, file  
**SUBJECT:** Environmental Impact Statement & Consistency Determination—Dulles International Airport—New Runways, Terminal Facilities, and Related Facilities; Fairfax and Loudoun Counties, Virginia; DEQ Project Code 05-215F

SEP 07 2005  
DEQ-Office of Environmental  
Impact Review

The Waste Division has completed its review of the Environmental Impact Statement and Consistency Determination for new runways, terminal facilities, and related facilities at Dulles International Airport in Fairfax and Loudoun Counties, Virginia. We have the following comments concerning the waste issues associated with this project:

The impact statement/consistency determination addressed both solid waste issues and sites and hazardous waste issues and sites. The report stated (p. 5-209) that a search of waste-related databases was included. The Waste Division staff completed a cursory review of its data files, and noted that the project area has been made subject to RCRA Corrective Action by the EPA. Leslie Romanchik, of DEQ's Office of Waste Permitting, was contacted for her review of this impact statement/consistency determination, and she will reply in a separate memo (if she identifies any additional issues). In addition, the data file search indicated that the following small quantity generators of hazardous waste are in the vicinity of the project area: VAR000505800—Transportation Security Admin.; VAR000006585—Thomas De La Rue, Inc.; VAD988202859 Nextel Aviation, Inc.; VAR000014670—German Armed Force Command; VAR000014662 Dulles Airport Marriott; VAR0000010579—Atlantic Coast Airlines; VAR000504050—DEA Special Testing & Research Lab; VAR000008474—Airline Tariff Publishing Co.; and VAR000006726—Exxon Co. USA No. 20338. The following website may prove helpful in locating additional information for these identification numbers:  
[http://www.epa.gov/echo/search\\_by\\_permit.html](http://www.epa.gov/echo/search_by_permit.html).

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of

Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Any structures that may be demolished/removed/renovated during the proposed addition should be checked for asbestos-containing materials (ACM) and lead-based paint prior to performing those activities. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Allen Brockman at (804) 698-4468.



**Department of Environmental Quality  
Waste Division  
Office of Waste Permitting**

TO: Allen Brockman

FROM: Leslie A. Romanchik *LAR*

COPY: Sanjay Thirunagari  
Dan Gwinner  
Maria Williams  
Richard Doucette

DATE: September 7, 2005

SUBJ: Final Environmental Impact Statement  
New Runways and Terminal Facilities  
Washington Dulles International Airport, Project 05-215F

The Office of Waste Permitting has reviewed the referenced Final Environmental Assessment (EA) dated August 2005. The document was prepared in support of runway and infrastructure construction at the airport. The potential impact of the activities on identified solid and hazardous waste management units subject to closure, permitting or corrective action under EPA or DEQ's authority was evaluated by the OWP.

The facility (Washington Dulles International Airport) has been made subject to RCRA Corrective Action by the EPA and the site was ranked by EPA in 1996 as a medium priority site using the National Corrective Action Prioritization System. EPA is currently working with the facility to address a release during the upgrade of the above ground fuel storage tank farm (hydrant system).

As the RCRA Corrective Action (CA) requirement applies to the entire site, the proposed construction may be impacted by the CA requirements. Although there is no record of a RCRA Facility Assessment identifying solid waste management units (SWMUs) being completed for the facility, several solid waste management units have been identified as a result of the NCAPS ranking. Section 5.20.3.2, Hazardous Material Build Alternatives, states that the proposed activities will not be in the immediate vicinity of identified SWMUs. In support of this determination, Figures 5.20.3-1 and 3-2 juxtapose the location of proposed activity with the known SWMUs. With the exception of the former Fire Training Facility which was clean-closed in accordance with Virginia's hazardous waste management regulations, the proposed construction does not appear to impact any known areas subject to RCRA CA.



Although the EIS indicates that the proposed activity will not impact known SWMUs, the Office of Waste Permitting recommends the facility contact Mr. Robert Greaves at EPA III to discuss the RCRA CA obligations at the site prior to initiating any land disturbing activities. He can be reached at (215) 814-3423.

Attachment

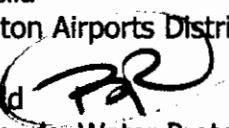


# MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER QUALITY  
Ellen Gilinsky, Ph.D., Director

---

**TO:** Mr. Joseph Delia  
FAA, Washington Airports District Office

**FROM:** Bettina Rayfield   
Office of Wetlands, Water Protection

**DATE:** September 7, 2005

**SUBJECT:** Final Environmental Impact Statement (DEIS)  
New Runways, Terminal Facilities & Related Facilities at Washington Dulles  
International Airport

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DEQ-Office of Environmental  
Impact Review

We have reviewed the information provided concerning the above-referenced project. The purpose of the project is to construct a new parallel north-south runway and a new parallel east-west runway, along with associated taxiways and navigational aids for the proposed runways, property acquisition, Tier 3 Concourse development, relocation of NOAA/NWS Sterling facilities and extension of the Automated People Mover at the Washington Dulles International Airport in Fairfax and Loudoun Counties, Virginia.

The report states that Build Alternative 3 (Preferred Alternative) would result in unavoidable impacts to wetlands and streams located within and adjacent to the construction sites. The MWAA has initiated Section 401/404 coordination with the Commonwealth of Virginia and the USACE to obtain the required certification and permit and implement a mitigation program for impacts to wetlands and streams associated with the proposed project. All wetlands and streams located within the construction site would be completely replaced by either impervious surfaces or mowed and maintained uplands. Approximately 286.1 acres of wetlands and 124,045 linear feet of stream are proposed for impact under Build Alternative 3. Based on this information, DEQ has the following comments:

1. DEQ, Office of Wetlands and Water Protection, reaffirms our previous comments written in response to the Draft EIS and submitted in a memorandum dated February 8, 2005. As previously stated, DEQ requires avoidance and minimization of impacts to surface waters to the maximum extent practicable in accordance with VWP regulation 9 VAC 25-210-80 and State Water Control Law (§ 62.1-44.15:5 Subsection D). The impacts totals have not reduced from the Draft EIS. DEQ recommends additional avoidance and minimization.
2. VWP regulation 9 VAC 25-210-80.1.k.4 (g) states "Applicants proposing off-site compensatory mitigation, including purchase or use of mitigation bank credits, or contribution to an in-lieu fee fund shall first discuss the feasibility of on-site compensatory mitigation." In addition, VWP regulation 9 VAC 25-210-115.B.3 states "Generally, preference shall be given in the following sequence: restoration, creation,

mitigation banking, in-lieu fee fund." Given the extensive nature of the proposed impacts, it would be appropriate to search in the immediate vicinity of the project for restoration opportunities to replace the lost functions and values directly within the subwatersheds being impacted. The fact that Dulles has already secured wetland credits at wetland banks does not weigh in DEQ's decision regarding the compensation ratio, nor the most ecologically preferable method of compensation.

3. The above requirements also apply to stream mitigation in that on- or off-site stream restoration is preferable to mitigation bank purchase.
4. Any construction activity impacting more than 0.40 hectare (1 acre) would require a *VPDES General Permit for Stormwater Discharges from Construction Sites* from the Virginia DEQ. Please coordinate with the Northern Regional Office to obtain this permit.
5. As stated in our comments to the Draft EIS, the project proponent should apply to the DEQ Northern Regional Office who will make the final permit determination. Some of the comments included here were included in the additional informational letter dated May 10, 2005.

**Ellis, Charles**

---

**From:** Bowden, John  
**Sent:** Thursday, August 25, 2005 2:01 PM  
**To:** Ellis, Charles  
**Subject:** EIS #05-215F

Charlie-Comments regarding the Final EIS and Consistency Determination regarding the New Runways, Terminal Facilities, and Related Facilities project at Dulles International Airport sponsored by USDOT/FAA will be submitted by the Central Office staff of the VWP Program. They are getting input from and coordinating their response with the VWP staff at NVRO. No further comments will be coming from this office.

**John D. Bowden**  
**Deputy Regional Director**  
**Department of Environmental Quality**  
**Northern Virginia Regional Office**  
**(703) 583-3880**  
**[jdbowden@deq.virginia.gov](mailto:jdbowden@deq.virginia.gov)**

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*COMMONWEALTH of VIRGINIA*

DEPARTMENT OF TRANSPORTATION  
1401 EAST BROAD STREET  
RICHMOND, VIRGINIA 23219-2000  
VirginiaDOT.org

GREGORY A. WHIRLEY  
ACTING COMMISSIONER

September 1, 2005

Mr. Charles H. Ellis III  
Department of Environmental Quality  
Office of Environmental Impact Review  
629 East Main Street, Sixth Floor  
Richmond, VA 23219

Re: New Runways, Terminal Facilities, and Related Facilities at Dulles International Airport

Dear Mr. Ellis:

Mr. Bob McDonald of the Virginia Department of Transportation has reviewed the information provided for the referenced project. In terms of potential impacts on transportation or planned highway improvements, the planned work should have no significant impact since the construction will take place within the confines of Airport property.

The anticipated significant growth in passenger and freight traffic will increase traffic on surrounding roadways, particularly VA 28 and the Dulles Airport Access Road. This growth in traffic is expected to occur regardless of whether the new runways and associated facilities are constructed (the "no build" condition). However, the increase in vehicles has already been considered in the regional transportation network modeling performed by the local MPO (the National Capital Transportation Planning Board) as part of its air quality conformity determination. This corroborates the "transportation conformity" statements on page 5-134 and the "surface transportation" overview on pages 5-215 & 5-216 of the FEIS. Highway improvements adjacent to the Airport already planned, or under construction, that will mitigate the impacts of this increased traffic include the widening (6 lanes to 8 lanes) of VA 28 and the widening (2 lanes to 4 lanes) of VA 606

Any land use requirements, lane closers, traffic control or work zone safety issues should be closely coordinated with affected counties and VDOT. All work with the potential to effect roadways or other transportation facilities should be coordinated with VDOT's Sandston Residency (804-328-3044).

Thank you for the opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicholas Nies".

Nicholas Nies  
Virginia Department of Transportation  
(804) 786-1092



Informal memo

September 2, 2005

TO: File

FROM:

C. Ellis



SUBJECT: VDOT Comments, Dulles Runways Final EIS  
(DEQ-05-215F)

Upon receipt, today, of the VDOT comments from Nick Nies, I noticed that he had the Sandston residency listed for coordination on the project. I called him up and found out the appropriate VDOT residency for the Airport project. Since Dulles is in two counties, there are two:

Fairfax County: Fairfax Residency, telephone (703) 383-8368

Loudoun County: Leesburg Residency, telephone (703) 737-2000.



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# COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.  
Secretary of Natural Resources

Kathleen S. Kilpatrick  
Director

Tel: (804) 367-2323  
Fax: (804) 367-2391  
TDD: (804) 367-2386  
www.dhr.state.va.us

September 1, 2005

Mr. Charles H. Ellis, III  
Department of Environmental Quality  
Office of Environmental Impact Review  
629 East Main Street, Sixth Floor  
Richmond, Virginia 23219

Re: Proposed Construction of New Runways, Terminal Facilities, and Related Facilities  
Washington Dulles International Airport  
Loudoun and Fairfax Counties  
DEQ Project # 05-215F  
DHR File # 1990-0460

Dear Mr. Ellis:

We have received your request for our review and comment on the proposed construction of new runways, terminal facilities, and related facilities at Dulles International Airport located in Loudoun and Fairfax counties. The Department of Historic Resources (DHR) is already in consultation with the Federal Aviation Administration (FAA) and the Metropolitan Washington Airport Authority (MWAA) regarding this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR 800. We anticipate that FAA and MWAA will continue this consultation with the aim of developing a Memorandum of Agreement (MOA). We request that the Department of Environmental Quality (DEQ) encourage the FAA to fulfill its federally mandated responsibilities under Section 106.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian  
Office of Review and Compliance

Administrative Services  
10 Courthouse Avenue  
Petersburg, VA 23803  
Tel: (804) 863-1624  
Fax: (804) 862-6196

Capital Region Office  
2801 Kensington Ave.  
Richmond, VA 23221  
Tel: (804) 367-2323  
Fax: (804) 367-2391

Portsmouth Region Office  
612 Court Street, 3<sup>rd</sup> Floor  
Portsmouth, VA 23704  
Tel: (757) 396-6707  
Fax: (757) 396-6712

Roanoke Region Office  
1030 Penmar Ave., SE  
Roanoke, VA 24013  
Tel: (540) 857-7585  
Fax: (540) 857-7588

Winchester Region Office  
107 N. Kent Street, Suite 203  
Winchester, VA 22601  
Tel: (540) 722-3427  
Fax: (540) 722-7535



If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

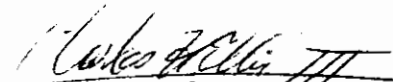
Please return your comments to:

MR. CHARLES H. ELLIS III  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF ENVIRONMENTAL IMPACT REVIEW  
629 EAST MAIN STREET, SIXTH FLOOR  
RICHMOND, VA 23219  
FAX #804/698-4319

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DEQ-Office of Environmental  
Impact Review

  
CHARLES H. ELLIS III  
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

NEW CONSTRUCTION MAY ENCOUNTER IGNEOUS ROCK  
WHICH WOULD REQUIRE SHOOTING / DRILLING TO  
REMOVE FROM EXCAVATIONS.

(signed)     *Conrad W. D. H.*     (date)     9/6/05      
(title)     GEOLOGIST      
(agency)     DMME



## Northern Virginia Regional Commission

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DEQ-Office of Environmental  
Impact Review

**Chairman**  
Hon. Barbara A. Favola  
**Vice-Chairman**  
Hon. Gerald E. Connolly  
**Treasurer**  
Hon. Harry J. "Hal" Parrish, II  
**Executive Director**  
G. Mark Gibb

September 12, 2005

**County of Arlington**  
Hon. Barbara A. Favola  
Hon. J. Walter Tejada

**County of Fairfax**  
Hon. Sharon Bulova  
Hon. Gerald E. Connolly  
Hon. Joan DuBois  
Hon. Penelope A. Gross  
Hon. Catherine M. Hudgins  
Hon. Elaine N. McConnell  
Hon. Linda Smyth

**County of Loudoun**  
Hon. Bruce E. Tulloch  
Hon. Lori Waters

**County of Prince William**  
Hon. Hilda M. Barg  
Hon. W. S. "Wally" Covington, III  
Hon. Martin E. Nohe

**City of Alexandria**  
Hon. Redella S. Pepper  
Hon. Paul C. Smedberg

**City of Fairfax**  
Hon. Joan Cross

**City of Falls Church**  
Hon. Robin S. Gardner

**City of Manassas**  
Hon. Harry J. "Hal" Parrish, II

**City of Manassas Park**  
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**Town of Leesburg**  
Hon. Kristen C. Umstattd

**Town of Purcellville**  
Hon. William T. Druhan, Jr.

**Town of Vienna**  
Hon. M. Jane Seeman

Mr. Charles H. Ellis III  
Department of Environmental Quality  
Office of Environmental Impact Review  
629 East Main Street, Sixth Floor  
Richmond, VA 23219

Dear Mr. Ellis:

The Northern Virginia Regional Commission staff has reviewed the application described below. Staff would like to note that a portion of the project will be occurring within the borders of the Occoquan Reservoir watershed. This reservoir, together with the Potomac River, serves as the drinking water source for over 1.2 million people in Northern Virginia. The remaining portion of the project drains to the Potomac River just upstream of the Fairfax Water drinking water intake. Special attention should be given to ensuring that proposed erosion and sedimentation control measures are fully implemented and adequately maintained during all land disturbing activities.

For post-construction stormwater quality management, the developing agency must adhere to the *post-development* water quality requirements set forth by the Virginia Stormwater Management Regulations. The applicant is to be commended for proposing to incorporate the principles of Low Impact Development (LID) into the stormwater management plan for the site

While only floodplains established by FEMA's Flood Insurance Rate Maps were used to quantify impacts, it should be noted that floodplains and perennial stream systems may be more extensive than areas shown as such on FEMA and USGS quad maps. Water-sensitive features should be delineated and assessed based on field conditions. A 1:1 mitigation ratio for mapped resources only may not adequately mitigate impacts.

It should be noted that Fairfax County has enacted a jurisdiction-wide Chesapeake Bay Resource Management Area (RMA) designation. This RMA designation requires that all development comply with the local ordinance's stormwater quality requirements. Special measures should be taken to ensure that deicing fluid will not be transported by stormwater to receiving water bodies, whether located in Loudoun County or Fairfax County.

The preferred build alternative will have extensive impacts on wetlands (286.1 acres), stream channels (124,045 linear feet) and large contiguous tracts of wildlife habitat. These impacts should, preferably, be mitigated within the Broad Run and Cub

(as of August 29, 2005)

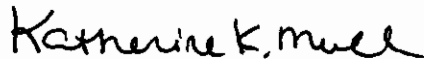
Run/Bull Run watersheds where the impacts will occur. While the Licking Run and Cedar Run wetlands banks, where mitigation is proposed, are located within the Occoquan watershed, efforts should be made to mitigate impacts in Loudoun and/or Fairfax counties, particularly in light of the need to preserve the high biodiversity ratings of Cub Run.

It should be further noted that an assessment of long-term cumulative impacts should include the development planned for the Broad Run and Cub Run/Bull Run watersheds. A current proposal for a 123-acre university campus and 15,000 homes is being considered for land located immediately west of IAD, within or near the 60 DNL noise contour, in the Broad Run watershed.

Opportunities to preserve, via purchases of land and/or easements, existing wildlife habitat corridors that may potentially be lost to future development should be evaluated. Both future development and opportunities for remediation/mitigation through conservation are located within a 5-mile radius of IAD, noted as the "Wildlife Attractant Restriction Zone." However, a number of parks, stream valleys, wildlife and environmental quality corridors currently exist within this 5-mile zone, including the entire Sugarland Run Stream Valley Park in Fairfax County, Runnymede Park in the Town of Herndon, and Claude Moore Park in Sterling. Closer to the airport, nature trails are located at the Eleanor C. Lawrence Park in Chantilly and in the Cub Run Stream Valley Park. Working with local government staff, the purchase of land or conservation easements to mitigate impacts of loss of wildlife corridors in the Broad Run or Cub Run/Bull Run watersheds should be considered.

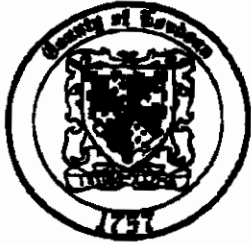
Thank you for this opportunity to participate in the intergovernmental review process.

Sincerely,



Katherine K. Mull  
Senior Environmental Planner

Project: New Runways, Terminal Facilities at IAD, Dulles, Virginia  
Sponsor: USDOT/FAA



## Loudoun County, Virginia

Department of Planning

1 Harrison Street, S.E., 3<sup>rd</sup> Floor, P.O. Box 7000, Leesburg, VA 20177-7000

Telephone (703) 777-0246 • Fax (703) 777-0441

September 9, 2005

Mr. Joseph Delia  
FAA, Washington Airports District Office  
23723 Air Freight Lane, Suite 210  
Dulles, Virginia 20166

Re: Dulles New Runways Environmental Impact Statement

Dear Mr. Delia,

Thank you for the opportunity to comment on the above referenced project. As stated in the Loudoun County Revised General Plan, "Loudoun County supports the continued growth and expansion of Washington Dulles International Airport. We will strive for land uses and County infrastructure consistent with the expansion" (Revised General Plan, Policy 9, p. 4-9).

More specifically, we concur with the selection of Alternative 3 as the Preferred Alternative, as this alternative promotes County policies, allows the Airport to achieve a 5-runway configuration, and minimizes environmental impacts. Compared to Alternative 4, Alternative 3 would help minimize land acquisition, aircraft taxi distances, waterway disturbance, vegetation disturbance, noise impacts, and historic resources impacts. Alternative 3 would also enhance Dulles' operational capabilities during marginal weather conditions and help achieve efficiencies in the greater national airport system.

While supportive of Alternative 3, we would request that the Federal Aviation Administration (FAA) and the Metropolitan Washington Airports Authority (MWAA) continue their coordination with Loudoun County regarding mitigation of expansion impacts, specifically as they relate to water quality, stormwater runoff, construction mitigation, and archeological investigations.

As noted in the Final Environmental Impact Statement (FEIS), 288 and 229 acres of impervious cover would be added to the Cub Run and the Broad Run Sub-Basins, respectively, and other areas of dense vegetation replaced with mowed grass (FEIS, Section 5.6.3.2). Additionally, the FEIS states that Alternative 3 would create the unavoidable loss of approximately 174.7 acres of jurisdictional wetlands and 60,858 linear feet of streams within the Limits of Disturbance. To mitigate for these impacts, the FAA would require the purchase of approximately 273.0 wetland credits and 60,858 stream linear feet-credits (FEIS, Section 6.2.4). The County has learned that mitigation banks have been established in Prince William and Fauquier Counties and already account for 200 of the required 273 acres. As such, we recommend that the FAA use both wetland banks and stream restoration projects within Loudoun and Fairfax Counties for all remaining requirements commensurate with Advisory Circular 150/5200-33, Hazardous Wildlife Attractants On or Near Airports. Given that the Airport expansion straddles the Cub Run and

Dulles New Runways Environmental Impact Statement  
Page 2

Broad Run Sub-Basins, stormwater management approaches adopted within the Airport property should attempt to honor the existing drainage divide. If a suitable site cannot be identified within an impacted sub-basin, sites should be explored in adjacent sub-basins within Loudoun and Fairfax Counties.

The preliminary design calculations also show that the 100-year peak discharge will increase from 6,224 cfs (cubic feet per second) for existing conditions to 6,586 cfs for the proposed project (FEIS, Section 6.2.5.2). The FEIS also states that "[t]he [Cub Run Stormwater Management] facility was ... designed to increase the 100-year flood elevation of the receiving stream by no more than one foot" (FEIS, Section 6.2.2.3). The County recommends that there be no increases in peak flows for the 1, 2, 10, and 100-year storms and that there be no increases in flood elevations for the 100-year event for off-airport downstream properties. The FAA should coordinate with the Federal Emergency Management Agency regarding proposed changes to floodplains with particular emphasis on the effects of these changes to downstream properties. The FAA should provide clear disclosure to affected property owners so that they can evaluate the proposal and assess both the impacts to their properties and the utility of the proposed mitigation efforts.

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In regards to erosion and sediment control, the FEIS states that "IAD [Dulles Airport] will use the Virginia requirements for erosion and sediment control as specified in the *State of Virginia Sediment and Erosion Control Handbook*" (FEIS, Section 6.2.2.7). It should be noted that, in accordance with Virginia Erosion and Sediment Control Law, Regulations, and Certification Regulations.

"The Department [of Conservation and Recreation] shall not approve a conservation plan submitted by a federal or state agency for a project involving a land-disturbing activity in one locality with a local program with more stringent regulations than those of the state program unless the conservation plan is consistent with the requirements of the local program" (§ 10.1-564).

Because Loudoun County program regulations have been submitted to the Department of Conservation and Recreation, the FAA should be advised that the more stringent local standards will control some isolated aspects of development. The FEIS acknowledges the use of various standards in its statement that "[a]ll applicable local, state, and Federal environmental construction controls should be incorporated into the specifications and construction plans necessary for the proposed project" (FEIS, Section 6.2.6).

The County also envisions stricter erosion and sediment control measures than the minimum standards in the Virginia Erosion and Sediment Control Handbook (VESCH). The runoff within

Dulles New Runways Environmental Impact Statement  
Page 3

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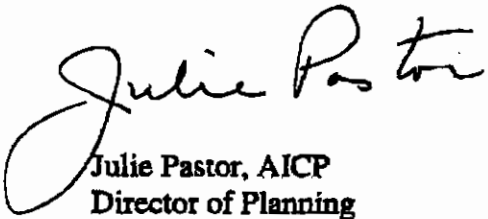
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### Conclusion

Loudoun County concurs with the selection of Alternative 3 as the Preferred Alternative. We look forward to working with the FAA and MWAA to mitigate the effects of the expansion and ensure land use compatibility in and around the Dulles Airport.

If you have any questions regarding these comments, please contact Joe Gorney, Senior Planner in the Loudoun County Department of Planning, at 703-771-5103.

Sincerely,



Julie Pastor, AICP  
Director of Planning

Cc: Linda Neri, Deputy County Administrator  
Charles H. Ellis, III, DEQ, Office of Environmental Impact Review



# FAIRFAX COUNTY

## Department of Planning & Zoning

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V I R G I N I A

September 22, 2005

Mr. Joseph Delia  
Federal Aviation Administration  
Washington Airports District Office  
23723 Air Freight Lane, Suite 210  
Dulles, VA 20166

Dear Mr. Delia:

Thank you for providing us with the opportunity to submit comments on the Final Environmental Impact Statement (FEIS) for New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport. County staff has reviewed this document and, through this letter, is transmitting its comments. Given that the National Environmental Policy Act (NEPA) process is expected to result in a Record of Decision in the near future, these comments focus on commitments and coordination efforts that we feel are appropriate in order to address many of the concerns raised in our earlier comments on the Draft Environmental Impact Statement (DEIS). We request that the Record of Decision be conditioned on procedures that will ensure that such commitments and coordination will be pursued.

We commend FAA and the Metropolitan Washington Airports Authority (MWAA) for their efforts and, in particular, for meeting with County staff last April to discuss the broad range of comments that the County offered in response to the DEIS. FAA and MWAA agreed with some of our concerns (most notably the need for longer-term noise analyses) and did not agree with others. Overall, we feel that FAA and MWAA have made a good faith effort to consider our comments and to better understand our concerns.

As we noted in our comments on the Draft Environmental Impact Statement (DEIS), Fairfax County supports the construction of two new runways at Dulles Airport; the need for the eventual construction of these runways has long been recognized in airport planning documents, and both Fairfax and Loudoun Counties have worked closely with MWAA in developing land use policies near the airport. MWAA has had the considerable foresight to provide both counties with long-term noise projections based on a five runway configuration and based on noise impacts down to the DNL 60 dBA level (which is beyond the DNL 65 dBA impact that has been incorporated into Part 150 planning exercises and federal interagency guidance addressing noise compatible land use). Through the provision

of substantial buffer areas on the airport property, and through land use planning that is sensitive to airport noise issues, MWAA, FAA, and Fairfax and Loudoun Counties have been able to craft a particularly effective airport noise compatibility effort. We feel that the proposed addition of two new runways to Dulles Airport is consistent with this effort and with regional efforts to ensure that future aircraft operational capacity growth in the Washington, D.C. area will be focused at Dulles Airport rather than at Ronald Reagan Washington National Airport. We also feel that the five runway concept is consistent with the County's Comprehensive Plan and with economic development objectives.

With respect to the selection of Alternative 3 (a 4,300 foot separation distance between the new north-south runway and the existing westernmost north-south runway) over Alternative 4 (a 5,000 foot separation distance) as the preferred alternative, we do not object to this conclusion based on the information that is provided in the FEIS. As noted in our comments on the DEIS, Alternative 3 would result in less land disturbance, slightly less impervious cover, and slightly lower emissions of atmospheric ozone precursors than Alternative 4 (with all differences in land disturbance and impervious cover occurring in Loudoun County). Further, the FEIS does not suggest that there will be significant differences between Alternatives 3 and 4 in terms of noise impacts, either in the 2010 time frame or the 2025 time frame. However, as noted in our comments on the DEIS, only one runway use scenario was considered, and there may be alternative runway use scenarios for which differences in noise impacts between the two build alternatives may be more significant. Further, it is likely that the potential variability in noise impact is greater within any one build alternative (considering alternative operational scenarios) than it is between the two build alternatives when considering only one operational scenario. The selection of Alternative 3 or 4 as the preferred alternative, therefore, is not as important as future decisions regarding how operations associated with the preferred alternative will occur. We therefore do not object to Alternative 3 as the preferred alternative but do recommend follow-up actions to ensure that operational decisions will serve to minimize noise impacts consistent with the efficient and safe operation of the airport.

It was clear from our April, 2005 meeting with FAA and MWAA that many of the concerns we raised in our comments on the DEIS were considered to fall outside of the context of the NEPA process and that continued coordination subsequent to this process would be needed to address these concerns. We support continued collaboration and note that progress on at least one of our concerns (relating to stormwater management) has been demonstrated through commitments that have been made in an August 30, 2005 letter from MWAA to the U.S Army Corps of Engineers. We are eager to continue our communications with MWAA on a number of issues and feel that we share the common goal of the provision and operation of additional capacity at the airport in a manner that will minimize noise impacts, maximize protection and restoration of natural resources, ensure protection of downstream areas from adverse drainage and water quality consequences, and ensure safe and efficient airport operations.



We have a number of recommendations for follow-up actions relating to several areas of concern and recommend that the Record of Decision incorporate conditions for such actions where appropriate. These recommendations are identified below.

### Noise

As noted above, it is our view that the potential variability in noise impact is greater within any one build alternative (considering alternative operational scenarios) than it is between the two build alternatives when considering only one operational scenario. We also note that the supplemental noise analyses for 2025, presented in Appendix D-16, confirm that, for any alternative, operations at the airport will increase substantially, as will individual noise events exceeding certain thresholds. [We therefore reiterate our earlier comment that MWAA and FAA evaluate flight operations to and from the existing and new runways to determine if operational changes can reduce impacts to residential areas and other noise-sensitive areas (e.g., the Sully Historic Site). Preferential runway use and operational procedures (e.g., flight tracks) should be evaluated to optimize flight operations in a manner that minimizes community noise exposure.] Such an analysis should not only consider communities located near the airport that may experience noise levels above DNL 60 dBA or individual events above 70 dBA but should also consider communities farther away from the airport that may benefit, or be adversely impacted by, operational changes. In light of the increasing number of noise-generating events projected for all alternatives, the identification of operational measures that can be taken to minimize noise impacts will become increasingly important.

1a

We also request that MWAA evaluate the potential noise impacts associated with a variety of potential operational scenarios in order to determine the long-term maximum potential noise contours associated with airport operations. [Noise contour analyses and presentations should include the DNL 75, 70, 65, and 60 dBA contours, as both Loudoun and Fairfax Counties rely on MWAA's noise contour projections down to DNL 60 dBA for their land use compatibility policies and requirements, and these contours were last updated by MWAA in 1993.]

1b

The FEIS assumes an operational capacity of 910,941 annual aircraft operations for the No-Action alternative. Appendix D-11 indicates that operations beyond this level would be constrained, in that the average delay per operation would exceed 20 minutes. We note that the projected operational capacity of 910,941 is nearly double the number of actual operations experienced in 2004; we question whether the existing three runway configuration at the airport can truly accommodate this level of use.

We reiterate our comment on the DEIS that encourages MWAA to pursue improvements to its noise monitoring network.

**Stormwater Management/Water Quality**

Our comments on the DEIS raised concerns regarding the impacts that the additional impervious cover in the Cub Run watershed would have on downstream water resources. We also raised concerns about a statement in the DEIS that suggested that downstream flood elevations could be raised by as much as one foot. [We recommended that MWAA and/or the project team ensure that stream volumes and velocities downstream of the site will not be erosive (or at least not any more erosive, in terms of duration and frequency of erosive conditions and stream velocity, than existing conditions) and that downstream flooding not increase as a result of the project.] Subsequent to our transmittal of comments on the DEIS, airport consultants and MWAA met with County staff to discuss stormwater management concerns. We appreciate MWAA's willingness to meet with County staff regarding stormwater management issues and the efforts of project consultants to follow-up with appropriate County staff. We recommend continuation of this collaboration, even if only on an informal basis. In addition, we recommend coordination between MWAA and the Fairfax County Park Authority (FCPA), particularly regarding the need to minimize impacts on downstream areas during construction. FCPA owns much of the property downstream of the airport in the Cub Run watershed and therefore has a strong interest in the effectiveness of stormwater management measures that will be provided on the site.

2a

It was clear from our meeting with MWAA staff and project consultants that the focus of detailed engineering and design at this time is on the new north-south runway and not the new east-west runway (which would have impacts on Cub Run). However, the design concepts introduced by project consultants for the north-south runway incorporated infiltrative stormwater management techniques, and the concepts of water quality swales and "Biological Treatment Units" have been included in discussions in the FEIS. Further, project consultants indicated that stormwater management measures for the east-west runway would probably be similar and would need to be sufficient to satisfy adequate outfall concerns consistent with County requirements. However, overall commitments in the FEIS to stormwater management system performance in the Cub Run watershed are general in nature, and a statement regarding a potential one-foot increase in downstream flood elevations remains (page 6-5).

MWAA has made more substantial commitments regarding the stormwater management system in an August 30 letter to the U.S. Army Corps of Engineers. Included in this letter is a commitment to the provision of "stormwater retention that will prevent an increase in peak flows for the 1-, 2-, 10-, and 100-year storms off-airport. These facilities will also ensure that there is no downstream increase in the elevation of the 100-year flood." [We recommend that these commitments be formalized in the Record of Decision and that stormwater management plans (and erosion and sediment control plans) demonstrating consistency with these commitments and relevant County stormwater management and erosion and sediment control requirements be provided to the Fairfax County Department of Public Works and Environmental Services (DPWES) for informal review and comment.] We also recommend that stormwater quantity control measures be provided during the construction process to ensure that increased peak runoff volumes during construction will be controlled; adverse impacts to downstream areas

2B

should be avoided both during and after construction. While we recognize that MWAA will not agree to County approval of stormwater management plans, we continue to recommend that MWAA design its stormwater management system such that it will be consistent with Fairfax County's stormwater management, best management practice (BMP) and erosion and sediment control requirements, with particular consideration given to ensuring that measures will be provided that are sufficient to meet or exceed the adequate outfall provisions of the County's Public Facilities Manual. We also encourage MWAA to partner with the Stormwater Planning Division of the Department of Public Works and Environmental Services to ensure that the comprehensive stormwater management plan for the airport is consistent and compatible with the Cub Run watershed management plan in protecting and restoring streams.

Fairfax County's BMP requirements include a 50% phosphorus reduction requirement for development in the Occoquan watershed. The aforementioned August 30 letter indicates that MWAA will provide stormwater management facilities that will be consistent with this standard. We recommend that this commitment be formalized in the Record of Decision and that MWAA provide supporting documentation to DPWES for review and comment.

The DEIS and FEIS indicate that, should there be accidental releases of deicing fluids into the stormwater drainage system, Fairfax Water will be notified. We continue to recommend that the Virginia Department of Environmental Quality and DPWES and other appropriate County representatives also be informed.

At our meeting in April, MWAA and FAA indicated that it is likely that the Virginia Department of Conservation and Recreation, Division of Chesapeake Bay Local Assistance (CBLA) will be contacted during the site plan process for review of plans subsequent to the Coastal Zone Management Act Consistency determination process. We request that Fairfax County, and the Land Development Services section of the Department of Public Works and Environmental Services in particular, be notified when any such reviews will be requested in order to allow for our coordination with CBLA.

### **Wetlands and Stream Mitigation**

In section 6.2.4 of the FEIS, it is stated that MWAA has, for the purpose of wetland mitigation, purchased credits in "mitigation banks whose service area includes the airport property." These mitigation banks are located in Prince William and Fauquier Counties. This section goes on to provide a detailed breakdown of wetland to be impacted by build alternative and wetland type. Section 6.3.4 states that 273 wetland acre credits would be required for the expansion project, and that 112 and 88 wetland acre credits have been purchased in the Cedar Run and Licking Run Mitigation Banks, respectively. Additionally, there would be the need for 60,858 linear feet-credits to compensate for stream losses. For the additional wetland mitigation credits, MWAA states that they are committed to the same process of purchasing credits in banks that are not local.

While we recognize that both of the wetland mitigation banks are located within the watershed of the Occoquan Reservoir, they are not in the immediate subwatersheds that will experience the adverse impacts associated with wetlands losses, and we feel that options are available to pursue mitigation efforts in these subwatersheds. It is our view that wetland and stream mitigation efforts should be pursued as close as possible to, and, where possible, within the same subwatersheds as, the impacts that these efforts are intended to mitigate. While it may be possible to replace some of the ecological functions of wetlands within other subwatersheds, we feel that the wetlands that will be filled or cleared as a result of the runway project serve important stormwater management and flood control functions that cannot be replaced within a different subwatershed. The adverse impacts of such wetland losses will create immediate downstream impacts within the Cub Run subwatershed, and not within the Cedar Run or Licking Run subwatersheds. To the extent possible, therefore, wetland mitigation efforts should be pursued in the same subwatershed(s) as the impacts in order to more fully mitigate the impacts where they will be experienced.

3a

It should also be noted that Cub Run is a tributary to Bull Run, which has been designated as being impaired (General Standard—Benthic) by the Virginia Department of Environmental Quality in accordance with Section 303 (d) of the Clean Water Act. The loss of wetlands in the Cub Run Watershed could serve to aggravate this water quality impairment, while the pursuit of mitigation efforts outside of the Bull Run Watershed will not provide commensurate benefits to Bull Run.

Stream and stream valley restoration projects are being identified in the Cub Run watershed by the Department of Public Works and Environmental Services (DPWES). While we recognize that it would be inappropriate to pursue wetland creation projects close to the airport that would result in increased wildlife conflict potentials, we do not feel that all of the projects that are being identified by DPWES would create such increased conflict potentials; those efforts that will not create wildlife conflicts should be considered as mitigation projects.

With respect to stream impact compensation, there are numerous sites within stream valley parks in the Cub Run watershed in Fairfax County (and the Horsepen Run watershed, for that matter) for which Fairfax County has identified specific stream restoration needs. In our view, pursuit of stream restoration projects (as mitigation for stream impacts at Dulles Airport) would be consistent with the Federal Aviation Administration (FAA) Advisory Circular addressing hazardous wildlife attractants (AC No. 150/5200-33). Stream restoration projects should be considered as a reasonable option because such restoration will not create such attractants and the FAA Advisory Circular does not preclude such options for mitigation at these sites.

3B

Page 6-22 of the FEIS states that MWAA will consider recommendations by Loudoun and Fairfax Counties to locate mitigation sites within the same watersheds as the impacts. A similar statement is made in the August 30, 2005 letter from MWAA to the U.S. Army Corps of Engineers. However, it is noted that any such site must either be located more than five miles from the airport or qualify for waivers of the Advisory Circular limitation on hazardous wildlife

attractants, and there appears to be a strong bias in both documents in favor of additional contributions to wetlands banks in lieu of efforts closer to the impacts. We feel that the emphasis should be on identifying wetland and stream mitigation projects in areas near the areas of impact; efforts should be made to identify projects that would not create or exacerbate wildlife hazards. Contributions to wetlands banks (beyond what has already been committed) should be viewed as a method of last resort rather than a preferred approach.

### **Ecological Resources**

Section 5.10.3 of the FEIS addresses impacts to rare, threatened or endangered species. Of the species identified as occurring or potentially occurring within the project area, the plant marsh hedgenettle (*Stachys palustris*), listed as extremely rare by the state of Virginia, will be most impacted. However, the FEIS states that essentially there will be no effort to avoid or relocate individual plants because these species can also be found elsewhere on the Dulles property that will not be impacted. [We recommend that efforts be made to locate and move marsh hedgenettle plants from the areas of impact to the areas that will not be impacted where this species has also been found at Dulles Airport.]

4

Our comments on the DEIS included a recommendation for MWAA to develop and implement a natural resource management plan for the portions of the airport property where natural habitats will remain. FAA and MWAA indicated that this effort would fall outside the scope of the NEPA process and would need to be pursued independently. We recommend that MWAA pursue such an effort and coordinate further with the Fairfax County Park Authority (FCPA).

Our comments on the DEIS also referenced an FCPA recommendation for the preservation of the 60-acre parcel south of the Sully Historic Site through the establishment of conservation easements on areas that are not needed for development or through the dedication of such areas to FCPA. FAA and MWAA have indicated that this falls outside the scope of the NEPA process. However, we recommend that this effort be pursued independently of this process.

### **Transportation**

It is clear from the 2025 noise analyses that the number of operations at the airport and the associated number of passengers using the airport will increase substantially for all alternatives, including the no action alternative. Transportation congestion concerns will, therefore, be largely independent of the decision regarding the construction of new runways. However, the substantial increase in use of the airport evokes concerns about the extent to which on-site and off-site roads can accommodate increased traffic. The FEIS identifies a number of on-site roadway improvements associated with various levels of airport usage. It is not clear if off-site improvements may be needed or if it is MWAA's intent to pursue such improvements if and when they are needed. [We recommend that MWAA establish a process through which long-term transportation needs will be evaluated and addressed through coordination with appropriate state and local agencies.]

5

**Air Quality**

We recommend that MWAA continue to work with the Metropolitan Washington Air Quality Committee on the implementation of measures that can be taken at the Airport to reduce emissions of air pollutants.

**Sully Historic Site**

Our comments on the DEIS raised concerns about the impact of operations at the airport with two new runways on the Sully Historic Site. The supplemental noise analyses in Appendix 16 confirm that, for any of the alternatives (including the No Action alternative), the number of daytime noise events above 70 dBA will increase substantially as the total number of airport operations increases with time. While the supplemental noise analyses suggest that either build alternative will compare favorably with the No Action alternative in terms of the numbers of such events, the increase in number of such events will have a substantial adverse impact on the site. [We recommend that MWAA evaluate operational alternatives that may serve to reduce the extent of the adverse impact to the Sully Historic Site and would welcome the opportunity to participate in a review of such alternatives.]

6

**Lighting**

Page 5-195 of the FEIS states: "the design process could utilize light shields wherever possible to direct light emissions, thereby minimizing the potential for off-airport light emission impacts. . . ." We support the pursuit of such efforts.

Please feel free to contact Noel Kaplan of my staff (703-324-1380) if you have any questions about our comments and recommendations.

Thank you again for providing us with the opportunity to participate in this review.

Sincerely,



For James P. Zook  
Director

JPZ:NHK

cc: Fairfax County Board of Supervisors  
Fairfax County Airports Advisory Committee  
Anthony H. Griffin, County Executive  
Robert A. Stalzer, Deputy County Executive

Mr. Joseph Delia

Page 9

cc: (continued)

Michael A. Kane, Director, Fairfax County Park Authority

Jimmie D. Jenkins, Director, Department of Public Works and Environmental Services

Dr. Gloria Addo-Ayensu, Director, Health Department

Kambiz Agazi, Fairfax County Environmental Coordinator

Katharine D. Ichter, Acting Director, Fairfax County Department of Transportation

George Nichols, Principal Environmental Planner, Metropolitan Washington Council of Governments

Fred R. Selden, Director, Planning Division, Department of Planning and Zoning

Noel H. Kaplan, Senior Environmental Planner, Environment and Development Review Branch, Department of Planning and Zoning

Charles H. Ellis, III, Virginia Department of Environmental Quality

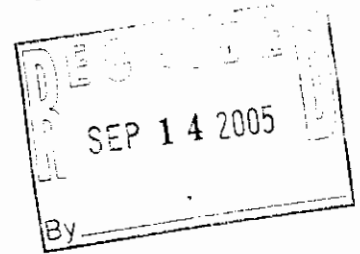


## Loudoun County, Virginia

Department of Planning

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September 9, 2005

Mr. Joseph Delia  
FAA, Washington Airports District Office  
23723 Air Freight Lane, Suite 210  
Dulles, Virginia 20166

Re: Dulles New Runways Environmental Impact Statement

Dear Mr. Delia,

Thank you for the opportunity to comment on the above referenced project. As stated in the Loudoun County Revised General Plan, "Loudoun County supports the continued growth and expansion of Washington Dulles International Airport. We will strive for land uses and County infrastructure consistent with the expansion" (Revised General Plan, Policy 9, p. 4-9).

More specifically, we concur with the selection of Alternative 3 as the Preferred Alternative, as this alternative promotes County policies, allows the Airport to achieve a 5-runway configuration, and minimizes environmental impacts. Compared to Alternative 4, Alternative 3 would help minimize land acquisition, aircraft taxi distances, waterway disturbance, vegetation disturbance, noise impacts, and historic resources impacts. Alternative 3 would also enhance Dulles' operational capabilities during marginal weather conditions and help achieve efficiencies in the greater national airport system.

While supportive of Alternative 3, we would request that the Federal Aviation Administration (FAA) and the Metropolitan Washington Airports Authority (MWAA) continue their coordination with Loudoun County regarding mitigation of expansion impacts, specifically as they relate to water quality, stormwater runoff, construction mitigation, and archeological investigations.

As noted in the Final Environmental Impact Statement (FEIS), 288 and 229 acres of impervious cover would be added to the Cub Run and the Broad Run Sub-Basins, respectively, and other areas of dense vegetation replaced with mowed grass (FEIS, Section 5.6.3.2). Additionally, the FEIS states that Alternative 3 would create the unavoidable loss of approximately 174.7 acres of jurisdictional wetlands and 60,858 linear feet of streams within the Limits of Disturbance. To mitigate for these impacts, the FAA would require the purchase of approximately 273.0 wetland credits and 60,858 stream linear feet-credits (FEIS, Section 6.2.4). The County has learned that mitigation banks have been established in Prince William and Fauquier Counties and already account for 200 of the required 273 acres. As such, we recommend that the FAA use both wetland banks and stream restoration projects within Loudoun and Fairfax Counties for all remaining requirements commensurate with Advisory Circular 150/5200-33, Hazardous Wildlife Attractants On or Near Airports. Given that the Airport expansion straddles the Cub Run and

1



Broad Run Sub-Basins, stormwater management approaches adopted within the Airport property should attempt to honor the existing drainage divide. If a suitable site cannot be identified within an impacted sub-basin, sites should be explored in adjacent sub-basins within Loudoun and Fairfax Counties.

The preliminary design calculations also show that the 100-year peak discharge will increase from 6,224 cfs (cubic feet per second) for existing conditions to 6,586 cfs for the proposed project (FEIS, Section 6.2.5.2). The FEIS also states that “[t]he [Cub Run Stormwater Management] facility was ... designed to increase the 100-year flood elevation of the receiving stream by no more than one foot” (FEIS, Section 6.2.2.3). [The County recommends that there be no increases in peak flows for the 1, 2, 10, and 100-year storms and that there be no increases in flood elevations for the 100-year event for off-airport downstream properties.] The FAA should coordinate with the Federal Emergency Management Agency regarding proposed changes to floodplains with particular emphasis on the effects of these changes to downstream properties. The FAA should provide clear disclosure to affected property owners so that they can evaluate the proposal and assess both the impacts to their properties and the utility of the proposed mitigation efforts.

2

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3

In regards to erosion and sediment control, the FEIS states that “IAD [Dulles Airport] will use the Virginia requirements for erosion and sediment control as specified in the *State of Virginia Sediment and Erosion Control Handbook*” (FEIS, Section 6.2.2.7). It should be noted that, in accordance with Virginia Erosion and Sediment Control Law, Regulations, and Certification Regulations,

“The Department [of Conservation and Recreation] shall not approve a conservation plan submitted by a federal or state agency for a project involving a land-disturbing activity in one locality with a local program with more stringent regulations than those of the state program unless the conservation plan is consistent with the requirements of the local program” (§ 10.1-564).

[Because Loudoun County program regulations have been submitted to the Department of Conservation and Recreation, the FAA should be advised that the more stringent local standards will control some isolated aspects of development.] The FEIS acknowledges the use of various standards in its statement that “[a]ll applicable local, state, and Federal environmental construction controls should be incorporated into the specifications and construction plans necessary for the proposed project” (FEIS, Section 6.2.6).

4a

[The County also envisions stricter erosion and sediment control measures than the minimum standards in the Virginia Erosion and Sediment Control Handbook (VESCH).] The runoff within

4B

the Bull Run watershed enters Lake Occoquan, a drinking water reservoir. By comparison, stricter erosion and sediment measures are already recommended for construction in the Beaverdam Reservoir watershed, located within Loudoun County and used as a drinking water supply. Volume 1 of the Goose Creek Source Water Protection Program, published in December 2003 by the Loudoun County Sanitation Authority, addresses these policies. Two stricter measures recommended in the Program applicable to the Airport expansion include doubling the current sediment trap/basin standard of 134 cubic yards/acre (Minimum Standard 6 of the VESCH) and verifying adequate channel conditions downstream of sediment traps/basins using the 1-year, 24-hour storm instead of the 2-year/24-hour storm (Minimum Standard 19 of the VESCH) (Table 4-1).

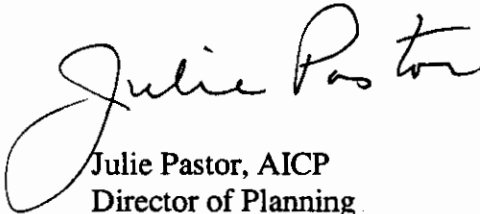
Lastly, in our Draft EIS comments, we requested the opportunity to participate as a consulting party in the Section 106 review process. Since that time, we have coordinated with MWAA regarding a Memorandum of Agreement that lists Loudoun County as a concurring party. We appreciate the opportunity to participate as a concurring party to enhance our database of archaeological and architectural resources.

### **Conclusion**

Loudoun County concurs with the selection of Alternative 3 as the Preferred Alternative. We look forward to working with the FAA and MWAA to mitigate the effects of the expansion and ensure land use compatibility in and around the Dulles Airport.

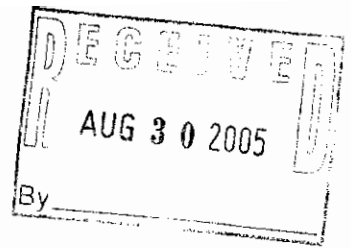
If you have any questions regarding these comments, please contact Joe Gorney, Senior Planner in the Loudoun County Department of Planning, at 703-771-5103.

Sincerely,



Julie Pastor, AICP  
Director of Planning

Cc: Linda Neri, Deputy County Administrator  
Charles H. Ellis, III, DEQ, Office of Environmental Impact Review



# COMMONWEALTH of VIRGINIA

Environmental Engineering Field Office  
400 S. Main St. 2<sup>nd</sup> Floor  
Culpeper, VA 22701

*Department of Health*  
*Office of Drinking Water*  
**AUG 29 2005**

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SUBJECT: Fairfax County  
Water - Dulles Airport

Mr. Joseph Delia  
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23723 Air Freight Lane, Suite 210  
Dulles, VA 20166

Dear Mr. Delia:

We have received a copy of the Final Environmental Impact Statement for the proposed new runways and related facilities at Washington Dulles International Airport.

We have reviewed the above referenced information to determine the impact on public drinking water supplies. Please be advised that this project as proposed should have no adverse impact on any existing public drinking water supplies, which is the purview of this office. Therefore, we have no objections or comments on this report.

A public water supply raw water intake for the Fairfax County Water Authority at the Occoquan Dam is located over 30 miles downstream of the discharge point or project area. A public water supply raw water intake for the Fairfax County Water Authority's Corbalis Plant, located in the Potomac River is located over 15 miles downstream of the discharge point or project area.

Should you have any questions regarding this matter, please feel free to contact me.

Sincerely,

Hugh J. Eggborn, P. E.  
Engineering Field Director

RDE/tjb

cc: Fairfax County Health Department  
Loudoun County Health Department  
ODW-Central (Steve Pellei, P. E.)  
S:\Dist 08\VPDES Comment Letters\Dulles FEIS.doc

## **Appendix B**

### **Section 106 Memorandum of Agreement**

**MEMORANDUM OF AGREEMENT  
AMONG  
THE FEDERAL AVIATION ADMINISTRATION,  
METROPOLITAN WASHINGTON AIRPORTS AUTHORITY, AND  
THE VIRGINIA DEPARTMENT OF HISTORIC RESOURCES,  
REGARDING THE  
NEW RUNWAYS, TERMINAL FACILITIES AND RELATED FACILITIES AT  
WASHINGTON DULLES INTERNATIONAL AIRPORT PROJECT**

**WHEREAS**, the Metropolitan Washington Airports Authority (Authority) is a public body corporate and politic created by interstate compact by the Commonwealth of Virginia and the District of Columbia, as authorized by the U.S. Congress in the Washington Airports Transfer Act of 1986 (P.L. 99-591); and

**WHEREAS**, the Authority, which exists independently of all other bodies, including the United States Government, the Commonwealth of Virginia, and the District of Columbia, has been given the full responsibility for the operation, maintenance, protection, promotion, and development of Washington Dulles International Airport (Dulles Airport) and Ronald Reagan Washington National Airport (National Airport), including responsibility for financing and making capital improvements at both airports; and

**WHEREAS**, although title to the National Airport and Dulles Airport real estate transferred by the United States Government to the Authority remains in the United States Government, the Washington Airports Transfer Act of 1986 states that National Airport, Dulles Airport and the Authority are not subject to the requirements of any law, including but not limited to the provisions of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.), solely by reason of the retention of the United States Government of fee simple title to those airports (49 U.S.C. §49111[b]); and

**WHEREAS**, real estate interests acquired by the Authority subsequent to the transfer of the Airports were acquired by the Authority and title thereto is held by the Authority, not the United States Government;

**WHEREAS**, the Authority is proposing construction of a new parallel north-south runway to the west of the airport, approximately 9,473 feet long by 150 feet wide, and a new parallel east-west runway to the south of the airport, approximately 10,500 feet long by 150 feet wide. The property on which these runways will be built consists partly of property transferred to the Authority by the United States Government, and partly of property purchased by the Authority. The proposed project also includes associated taxiways, navigational aids, and construction of a Tier 3 Concourse in accordance with the FAA's 1985 Master Plan Study for Washington Dulles International Airport and the Authority's 2004 updated Airport Layout Plan, also known as the "Project;" and

**WHEREAS**, the Federal Aviation Administration (FAA) is the responsible Federal agency pursuant to the National Environmental Policy Act of 1969 (NEPA, 42 USC §4321 et. seq.) and is responsible for compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA, 16 USC 470f); and

**WHEREAS**, the *Final Environmental Impact Statement for New Runways, Terminal Facilities, and Related Facilities at Washington Dulles International Airport* (issued August 2005) (FEIS) and supporting technical reports provide background information for this Memorandum of Agreement (MOA); and

**WHEREAS**, the Authority, the Virginia State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (Council) are parties to a 1987 Programmatic Memorandum of Agreement (PMOA) executed in connection with the FAA's transfer of Ronald Reagan Washington National and Washington Dulles International Airports from the FAA to the Authority; and

**WHEREAS**, the PMOA governs the handling of undertakings at the airports that may have an effect on properties eligible for inclusion in the National Register of Historic Places (National Register) and provides that such projects will be handled in accordance with 36 CFR Part 800 with respect to review by the SHPO and the Council; and

**WHEREAS**, the FAA has consulted on the Project with the SHPO, pursuant to 36 CFR Part 800, *Protection of Historic Properties*, regulations implementing Section 106 of the National Historic Preservation Act, as amended (16 USC 470f) and the 1987 PMOA; and

**WHEREAS**, the FAA and the Authority, in consultation with the SHPO, have determined the Area of Potential Effects (APE) for the Project, as defined in 36 CFR 800.16(d), and as shown in Figures 4.1 and 4.2 of the August 2005 Preliminary Final Historic Resources Survey and Effects Assessment Report for the Project, which is included within Volume 2, Appendix C-2, of the FEIS, have completed Phase I investigations of archeological resources, Phase II National Register evaluation studies of archaeological resources, as well as identification surveys and National Register evaluations of above-ground historic resources, to meet their responsibilities under 36 CFR Part 800 associated with the development of the FEIS; and

**WHEREAS**, the FAA and the Authority have determined, in consultation with the SHPO, that the Project may have an effect on the Dulles Airport Historic District, which has been determined to be eligible for listing in the National Register of Historic Places (National Register); and

**WHEREAS**, the FAA and the Authority have determined, in consultation with the SHPO, that the Project will have an adverse effect on one or more archeological resources, including site 44FX2840, that are eligible for inclusion in the National Register under Criterion D, as a result of activities related to implementation of the Project, including, but not limited to, construction staging, ground disturbance, and construction; and

**WHEREAS**, the Council has been provided an opportunity to comment on this MOA, and in a July 19, 2005 letter, has declined to participate in ongoing Section 106 consultation or as a signatory of this MOA; and

**WHEREAS**, Loudoun County, Virginia has formally requested to serve as a consulting party to this MOA pursuant to 36 CFR 800.2(c)(3), but because Loudoun County does not have legal authority or jurisdiction over the Authority's activities at the airport, the FAA and the Authority have determined that Loudoun County will be provided with the opportunity to sign this MOA as a concurring party, and the FAA and the Authority shall share historic property information that will be generated as a result of Phase I, II, and II studies that will be produced in support of the Project; and

**WHEREAS**, although Fairfax County, Virginia has not formally requested to serve as a party to this MOA pursuant to 36 CFR 800.2(c)(3), and does not have legal authority or jurisdiction over the Authority's activities at the airport, the FAA and the Authority have determined that the Fairfax County will be provided with the opportunity to sign this MOA as a concurring party, and the FAA and the Authority shall share historic property information that will be generated as the result of Phase I, II, and III studies produced in support of the Project; and

**WHEREAS**, pursuant to 36 CFR 800.2(c)(5), the Virginia Council on Indians (VCI), having a demonstrated interest in the preservation, study, and dissemination of information regarding the cultural heritage of Indians within the Commonwealth of Virginia, has participated in consultation, and has also been invited to concur in this MOA; and

**WHEREAS**, to the best of the FAA and the Authority's knowledge and belief, no human remains, associated or unassociated funerary objects or sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001), are expected to be encountered in the Phase III archaeological work; and

**WHEREAS**, the FAA has informed and involved the public in Section 106 review through public NEPA scoping meetings held in June 2002, public information meetings on the Project and the Draft Environmental Impact Statement held on October 7 and 8, 2003, April 23 and 24, 2004, and February 22 and 23, 2005, and through additional informal meetings and outreach materials, pursuant to 36 CFR 800.2(d), and has specifically invited comments on the Section 106 process; and

**NOW, THEREFORE** the FAA and the SHPO agree that the Project will be implemented in accordance with the following stipulations in order to take into account the effect of the Project on historic properties.

## **Stipulations**

The FAA shall ensure that the following measures are carried out:

### **I. Design Review**

- A. All design elements related to the Tier 3 Concourse Improvements at Dulles shall conform to the existing Dulles Airport architectural design guidelines, which are included in this MOA as Appendix 1, and the current airport Master Plan, which includes general planning guidelines taken from the original 1964 Saarinen Master Plan.
- B. The design of the Tier 3 Concourse Improvements shall take into account the historic and architectural qualities of the original Dulles International Airport Historic District and incorporate the recommended approaches to new construction set forth in the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.
- C. The Authority shall submit to the SHPO the preliminary design plans for the Tier 3 Concourse Improvements to request its concurrence that the design of the proposed building is sensitive to the historic architectural character of the Dulles Airport Historic District. The Authority shall concurrently notify the other consulting and concurring parties of this transmittal to the SHPO.

The Authority shall further ensure that the Project Architect shall submit to the SHPO for its review and comment complete project plans and specifications for the Tier 3 Concourse Improvements including its exterior elements and all site improvements surrounding the building. The Architect shall submit such plans to the SHPO at the completion of the 30%, 60%, and 90% design development levels. For each submission, the Authority shall notify the other consulting and concurring parties of this transmittal to the SHPO.

### **II. Dulles Airport Historic District**

- A. During the final design phase, the Authority shall consult with the SHPO to assess the Tier 3 Concourse Improvements design's effects on the Dulles Airport Historic District. The documentation submitted to the SHPO shall include, but is not limited to, the completion of a viewshed analysis in order to study the potential visual impacts of the Tier 3 Concourse Improvements on the main concourse of the Main Terminal and the South Finger.



- B If the Authority, in consultation with the SHPO, agree that the Tier 3 Concourse Improvements design will have an adverse visual effect on the historic district, the Authority shall develop and implement a treatment plan, in accordance with the appropriate standards and guidelines listed in section V.B. of this MOA, to avoid, minimize, or mitigate visual impacts. The treatment plan shall be approved by the SHPO prior to implementation.
- C. If the Authority and the SHPO disagree over the effect of the improvements on the historic district, or over the contents of the Treatment Plan, the parties will follow the dispute resolution process outlined in Stipulation VIII. of this MOA.

### **III. Archaeology**

#### **A. Phase II Site Evaluation**

1. FAA and the Authority have completed Phase II Site Evaluation Studies for the following sites, all of which were jointly recommended for further evaluation by FAA, the Authority, and SHPO in 2004:
  - a) North-South Runway: 44LD538, 44LD539, 44LD543, 44LD1029, 44LD1034, 44LD1037, 44LD1041, and 44LD1042.
  - b) Crosswind Runway: 44LD1077, 44LD1081, 44FX2540, 44FX2541, and 44FX2839.
2. Following the completion of the Phase II investigations, each site listed in Stipulation III.A.1. of this MOA was evaluated for National Register eligibility using the criteria outlined in National Register Bulletin 15, Guidelines for Applying the National Register Criteria for Evaluation, published by the National Park Service. Evaluation efforts were conducted in a manner consistent with the standards and guidelines listed in Stipulation VI.B. of this MOA.
3. The FAA and the Authority provided the SHPO with an opportunity to comment, review, and approve the Phase II reports. The SHPO concurred that site 44FX2840, as well as sites 44LD538 (Historic Component), 44LD539 (Historic Component), and 44LD1042 (Historic Component) are eligible for listing in the National Register. The SHPO determined that the Prehistoric Component of site 44LD539 was ineligible for listing in the National Register.
4. Upon determining if a site is eligible for the National Register, FAA, the Authority, and the SHPO, after considering the views of Loudoun County, Fairfax County, and VCI, shall jointly determine if an eligible

site adversely affected by the Project will be preserved in place or will require Phase III Data Recovery. **The Authority shall provide the SHPO with plans and other supporting documentation to assist the SHPO in assessing effects on eligible archaeological sites.**

## **B. Treatment of Archaeological Sites**

1. If an archaeological site that meets the criteria for inclusion in the National Register will be adversely affected by the Project, the Authority shall develop a plan, in consultation with the SHPO and other concurring parties, to reduce, avoid, or mitigate the Project's effects on the archaeological site. Treatment plans shall:
  - a) Wherever practicable, provide for the preservation of archaeological sites in place and include provisions for long-term management;
  - b) Where necessary to preserve such sites, provide for management actions including physical stabilization, planting, and fencing;
  - c) Where physical disturbance is unavoidable, set forth provisions for archaeological data recovery including at least the following elements:
    1. Information on each archaeological site or group of related sites where data recovery is to be carried out;
    2. Identification of research questions to be addressed through data recovery, including research questions that are important to the Virginia Indian community, with explanation and justification of their relevance and importance;
    3. Where data recovery is proposed, description of methods to be used, with explanations of their pertinence to research questions or other rationale for their employment;
    4. Detailed arrangements for keeping the SHPO and other concurring parties fully informed of, and in the case of prehistoric sites, providing the VCI and any relevant tribes full opportunity to monitor or take part in all operations;
    5. Arrangements for regular progress reports to keep the SHPO and other concurring parties up to date on the work;

6. A proposed timetable for testing, excavation, analysis, and preparation of technical reports and other publications; and
  7. Where human remains may be unearthed, the information and assurances required by the Virginia Department of Historic Resources for issuance of a permit under Virginia Code 10.1-2305(A), and assurances that any such remains will be treated with dignity and respect.
2. The Authority shall provide each Treatment Plan to the SHPO, the FAA, and other concurring parties for review and comment. The plan shall be approved by the SHPO prior to implementation. The Treatment Plan shall include information pertaining to:
    - a) the disposition of recovered materials and records; and
    - b) proposed methods for involving the interested public in the data recovery process, as well as methods for disseminating the results of the work to the interested public.
  3. The Authority shall ensure that the Treatment Plan is implemented and that all Data Recovery activities are concluded, with concurrence received from the SHPO, before the site is disturbed by construction activities.

### **C. In-Situ Preservation**

1. The Authority shall ensure that any site recommended for In-Situ Preservation through the steps outlined in Stipulation III.A. of this MOA shall remain undisturbed during construction activities. Semi-permanent metal fencing (e.g., chain-link fencing) shall be placed around the perimeter of sites during construction activities to help ensure that the area remains undisturbed.
2. The site shall be monitored during adjacent construction activities and shall be included in progress reports as outlined in Stipulation VII.B.

## **IV. Post-Review Discoveries**

### **A. Historic Properties**

In the event that unanticipated effects on historic properties are found during the implementation of this MOA, the Authority will stop work that may adversely affect the historic property or may foreclose opportunities to avoid such adverse effects. The Authority shall consult with the SHPO, with the FAA, and with other concurring parties as appropriate, to

determine the appropriate course of action to comply with Section 106. If necessary, the Authority, SHPO, the FAA, and other concurring parties, shall review the terms of this MOA and determine whether revisions are needed. Any revisions to the Agreement shall be made in accordance with Stipulation XI. below.

## **B. Archaeological Resources**

1. In the event that a previously unidentified archaeological resource is discovered during ground disturbing activities, the Authority will immediately halt all construction work involving ground disturbance in the immediate area of the resource and in the surrounding area where further subsurface resources may reasonably be expected to occur. An archaeologist meeting the *Secretary of the Interior's Professional Qualification Standards* (CFR Part 61) will immediately inspect the work site and determine the extent and nature of the affected archaeological property. The archaeologist may consult with the SHPO and other parties as deemed appropriate by the archaeologist in setting the boundaries of the archaeological resource. Construction work may then proceed in the Project area outside of the defined archaeological site area.

In accordance with 36 CFR 800.13(b), the identification of unanticipated finds during the implementation of the Project does not require the Authority to stop work on the overall Project, but to make reasonable efforts to avoid or minimize harm to the resource until the requirements of 36 CFR 800.13 are met.

2. Within two (2) working days of the discovery, the Authority shall notify the SHPO. The notification shall describe the Authority's assessment of the National Register eligibility of the property and proposed actions to resolve the adverse effect, if any. The SHPO shall respond within two (2) working days of notification and construction may resume when the SHPO agrees. The Authority shall take into account the SHPO's recommendations regarding National Register eligibility and proposed actions, and then carry out the appropriate actions. The Authority shall provide the SHPO with a report of these actions once they are complete.
3. If the archaeological resource is determined as eligible for listing in the National Register (36 CFR Part 60.6), the Authority shall ensure compliance with Section 800.13 of the Council's regulations.
4. Any disputes over the evaluation or treatment of unanticipated finds will be resolved as provided in Stipulation VIII of this MOA.

## **V. Human Remains**

The Authority shall ensure that human skeletal remains and associated funerary objects encountered during the course of actions taken as a result of this agreement shall be treated in accordance with the Regulations Governing Permits for the Archaeological Removal of Human Remains (Virginia Register 390-01-02) found in the Code of Virginia (10.1-2305, et seq., Virginia Antiquities Act). If necessary, the applicant will obtain a permit from the SHPO for the removal of human remains in accordance with the regulations stated above.

## **VI. Administration**

### **A. Review Period**

1. The SHPO, and all other consulting and concurring parties, shall provide comments on documentation submitted pursuant to this MOA within thirty (30) calendar days, unless the review period is otherwise specified in the stipulations above. If no comments are received from the SHPO within the 30 day comment period, the Authority may assume concurrence and proceed on the basis of its conclusions or recommendations, if any.

### **B. Professional Qualifications**

1. All archaeological work carried out pursuant to this MOA shall be conducted by, or under the direct supervision of, an individual or individuals who meet, at minimum, the qualifications for archaeology set forth in The Secretary of Interior's Professional Qualification Standards (48 FR 44716, Sept. 1983), hereinafter referred to as the "Secretary's Standards".
2. All evaluations of buildings and structures will be carried out by, or under the direct supervision of, an individual or individuals who meet, at a minimum, the qualifications for architectural history set forth in the Secretary's Standards. All design work on historic buildings and structures shall be carried out by, or under the supervision of an individual or individuals meeting the qualifications for historic architecture as set forth in the Secretary's Standards.

### **C. Standards and Guidelines**

The Authority shall ensure that all cultural resource work carried out pursuant to this Agreement shall be carried out in accordance with the following standards and guidelines, as applicable:

1. *Archeological Resources Protection Act of 1979*, as amended (16 USC 470aa-470ll);
2. *Curation of Federally-Owned and Administered Archeological Collections* (36 CFR Part 79);
3. *National Historic Preservation Act of 1966*, as amended (16 USC 470 et seq.);
4. *Native American Graves Protection and Repatriation Act of 1990* (25 USC 3001 et seq.);
5. *Protection of Historic Properties* (36 CFR Part 800);
6. Advisory Council on Historic Preservation: *Recommended Approach for Consultation and Recovery of Significant Information from Archaeological Sites* (1999);
7. National Park Service: National Register Bulletin 15- *Guidelines for Applying the National Register Criteria for Evaluation*;
8. National Park Service: National Park Service Guideline No. 28- *Cultural Resource Management Guideline*;
9. The Secretary of the Interior: *Standards and Guidelines for Archeology and Historic Preservation* (1983) (48 FR 44716-44742);
10. The Secretary of the Interior: *Standards and Guidelines for Curation* (36 CFR Part 79);
11. The Secretary of the Interior: *Standards for the Treatment of Historic Properties* (36 CFR Part 68);
12. The Secretary of the Interior: *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (36 CFR Part 68);
13. Virginia Department of Historic Resources: *Guidelines for Conducting Cultural Resource Survey in Virginia*, revised (2003); and
14. Virginia Department of Historic Resources: *State Curation Standards*.

#### **D. Curation**

The Authority shall ensure that all archeological materials resulting from actions carried out under this Agreement, including appropriate field and research notes, maps, drawing and photographic records, with the exception of human skeletal remains and associated funerary objects, are curated in accordance with 36 CFR Part 79 and the SHPO's *State Curation Standards*. All materials will be cared for in a repository approved by the SHPO and will be made available to educational institutions and individual scholars for appropriate exhibit and/or research under the operating policies of the selected repository.

### **E. Distribution of Reports and Review Within Specified Timeframes**

The Authority shall provide copies of all draft technical reports prepared under this MOA for comment to all consulting and concurring parties unless they have advised in writing that they need not receive copies. The Authority shall ensure that draft reports are modified to respond to comments, subject to Stipulation VII. (Dispute Resolution). Failure of a recipient to comment within the specified review period shall not preclude the Authority from finalizing the report and proceeding on the basis of its conclusions and recommendations, if any.

The Authority shall prepare sufficient copies of all final reports completed pursuant to this MOA and provide them to the SHPO, the consulting and concurring parties, and as appropriate, to public libraries, educational institutions, and other repositories. All draft and final reports submitted to the SHPO shall be in two (2) copies, in spiral binding, and on acid-free paper.

### **VII. Monitoring and Reporting**

- A. Upon request, the SHPO, Loudoun County, Fairfax County, and VCI may review any activities carried out pursuant to this Agreement. The Authority shall cooperate with the requesting agency or unit of government to review project files or visit the project site to view activities at specific project locations.
- B. The Authority shall prepare an annual report summarizing the activities carried out in accordance with this MOA. This report shall be transmitted to the SHPO and other consulting and concurring parties by February 1st of each year this Agreement is in effect, beginning in year following the execution of this MOA and continuing until the year following completion of construction activities associated with the Project. The Authority shall also ensure that this annual report is made available for public review and that members of the public who are invited to provide comments to the SHPO and other consulting and concurring parties.

The SHPO and other consulting and concurring parties shall review the annual report and provide any comments to the Authority. Based on this review, the Authority shall determine whether this MOA shall continue in force, be amended, or be terminated. If requested by any required or concurring signatory to this MOA, the Authority shall ensure that a meeting is held to facilitate review and comment, to resolve questions, or to resolve adverse comments.

### **VIII. Dispute Resolution**

- A. Should any signatory object in writing regarding any action specified in the MOA, then the Authority shall consult with the objecting party to resolve this objection. If after such consultation, the Authority determines that the objection cannot be resolved through consultation, then the Authority shall prepare documentation relevant to the objection in accordance with 36 CFR 800.11, and the Authority shall forward such documentation to the Council, including the Authority's proposed response to the objection. Within 30 days after receipt of pertinent documentation, the Council is expected to exercise one of the following options:
1. Provide the Authority with a staff-level recommendation, which the Authority shall take into account in reaching a final decision regarding its response to the objection; or
  2. Notify the Authority that the objection will be referred for formal comment pursuant to 36 CFR 800.7(c), and proceed to refer the objection and comment. The Authority shall take into account the Council's comments in reaching a final decision regarding its response to the objection.
- B. The responsibility of the Authority to carry out all actions under the MOA not affected by the dispute shall remain unchanged.
- C. If the dispute cannot be resolved upon involvement of the Council, the Authority, the FAA, or the SHPO may terminate the MOA in accordance with Stipulation XII. below.

### **IX. Review of Public Objections**

- A. At any time during implementation of the measures stipulated in this Agreement, should any objection to any such measure or its manner of implementation be raised by a member of the public, the Authority shall take the objection into account, notify the SHPO and other consulting and concurring parties, and consult as needed with the objecting party, and with the other consulting and concurring parties, to resolve the objection. If the objection cannot be resolved, the Authority shall follow the steps outlined in Stipulation VIII.A. above to obtain Council comment.



## **X. Record Keeping**

- A. The Authority shall maintain records of all activities undertaken pursuant to this Agreement which shall become part of the Environmental Review Record for the project including:
1. All records related to the selection of Professionals who perform the work stipulated in the provisions of this MOA, which clearly documents adherence to the Secretary of the Interior's Professional Qualification Standards (48 FR 44716, Sept. 1983);
  2. All records of correspondence and finding letters provided by the SHPO to the FAA and the Authority;
  3. All records indicating all mitigation measures taken in accordance with the provisions of this MOA;
  4. All records related to consultations with the SHPO and other consulting and concurring parties following the execution of this MOA;
  5. All records of public comments received during public hearings and written or telephonic comments received from the public at all other times;
  6. All of the above records shall be maintained for a minimum of three (3) years after completion of the project and shall be made available to the general public and additional parties with a demonstrated interest in the undertaking upon request during this time frame.

## **XI. Amendments**

- A. Any party to this Agreement may request that it be amended or modified, whereupon FAA, the Authority, the SHPO, Loudoun County, Fairfax County, and VCI shall consult in accordance with 36 CFR Part 800.13 to consider such revisions.
- B. Any resulting amendments or addenda shall be in writing, developed and executed among the Authority, the SHPO, and other consulting and concurring parties, in the same manner as the original MOA.

## **XII. Termination**

- A. The Authority, the FAA, or the SHPO may terminate the Agreement by providing thirty (30) days notice to the other parties and in accordance with the procedures described in 36 CFR 800.6(c)(8), provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.

- B. Termination shall include the submission of a technical report by the Authority on any work done up to and including the date of termination.

### **XIII. Failure to Comply**

- A. In the event that the Authority does not carry out the terms of this MOA, FAA and the Authority will comply with 36 CFR Parts 800.4 through 800.6 with regard to individual undertakings covered by this MOA.

### **XIV. Duration of Agreement**

- A. The provisions of this MOA will be carried out from the date of execution of this Agreement through completion of the results and reporting phase of all archaeological investigations related to the Project, all construction aspects of the Project, or December 31, 2015, whichever occurs first.
- B. At any time during the six-month period prior to the project completion date, the Authority may request the signatory consulting parties to consider an extension or modification of this MOA. No extension or modification will be effective unless all signatory consulting parties to the MOA have agreed with it in writing.

Execution of this Agreement by FAA, the Authority, and the SHPO, with concurrence of Loudoun County, Fairfax County, and the Virginia Council on Indians, and implementation of its terms by the Authority, is evidence that the FAA has afforded the Council an opportunity to comment on the proposed New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport Project in Chantilly, Virginia, and that FAA has taken into account the effects of the proposed project on historic properties.

**SIGNATORY:**

**FEDERAL AVIATION ADMINISTRATION**

*for* Joseph B. Debia  
Terry Page

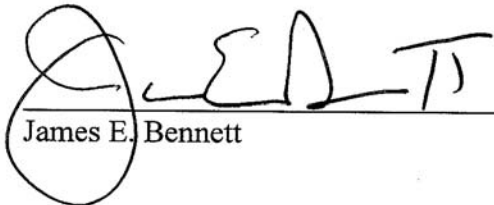
10/1/2005  
Date

Manager, Washington Airports District Office

Execution of this Agreement by FAA, the Authority, and the SHPO, with concurrence of Loudoun County, Fairfax County, and the Virginia Council on Indians, and implementation of its terms by the Authority, is evidence that FAA has afforded the Council an opportunity to comment on the proposed New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport Project in Chantilly, Virginia, and that FAA has taken into account the effects of the proposed project on historic properties.

**SIGNATORY:**

**METROPOLITAN WASHINGTON AIRPORTS AUTHORITY**

  
\_\_\_\_\_  
James E. Bennett


10/3/05  
Date

President and Chief Executive Officer

Execution of this Agreement by FAA, the Authority, and the SHPO, with concurrence of Loudoun County, Fairfax County, and the Virginia Council on Indians, and implementation of its terms by the Authority, is evidence that FAA has afforded the Council an opportunity to comment on the proposed New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport Project in Chantilly, Virginia, and that FAA has taken into account the effects of the proposed project on historic properties.

**SIGNATORY:**

**VIRGINIA STATE HISTORIC PRESERVATION OFFICER**

  
\_\_\_\_\_  
Kathleen S. Kilpatrick


  
\_\_\_\_\_  
Date

State Historic Preservation Officer and Director,  
Virginia Department of Historic Resources

Execution of this Agreement by FAA, the Authority, and the SHPO, with concurrence of Loudoun County, Fairfax County, and the Virginia Council on Indians, and implementation of its terms by the Authority, is evidence that FAA has afforded the Council an opportunity to comment on the proposed New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport Project in Chantilly, Virginia, and that FAA has taken into account the effects of the proposed project on historic properties.

**CONCURRING PARTY:**

**LOUDOUN COUNTY, VIRGINIA**


  
\_\_\_\_\_  
Kirby Bowers  
\_\_\_\_\_  
County Administrator

Date 10/5/05

Execution of this Agreement by FAA, the Authority, and the SHPO, with concurrence of Loudoun County, Fairfax County, and the Virginia Council on Indians, and implementation of its terms by the Authority, is evidence that FAA has afforded the Council an opportunity to comment on the proposed New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport Project in Chantilly, Virginia, and that FAA has taken into account the effects of the proposed project on historic properties.

**CONCURRING PARTY:**

**FAIRFAX COUNTY, VIRGINIA**

  
\_\_\_\_\_  
Anthony H. Griffin

10/6/05  
Date

County Executive

Execution of this Agreement by FAA, the Authority, and the SHPO, with concurrence of Loudoun County, Fairfax County, and the Virginia Council on Indians, and implementation of its terms by the Authority, is evidence that FAA has afforded the Council an opportunity to comment on the proposed New Runways, Terminal Facilities and Related Facilities at Washington Dulles International Airport Project in Chantilly, Virginia, and that FAA has taken into account the effects of the proposed project on historic properties.

**CONCURRING PARTY:**

**VIRGINIA COUNCIL ON INDIANS**

  
\_\_\_\_\_  
Deanna Beacham

10/7/05  
Date

Program Specialist



## **Appendix 1**

### **Dulles Airport Architectural Design Guidelines**

*Because of the size of this document,  
please see <http://www.mwaa.com/authority/dm/index.htm>  
for the most recent copy of this set of MWAA guidelines.*

# **Appendix C**

## **Summary of Mitigation Program**

# Summary of Mitigation Program

## MITIGATION MEASURES FOR THE PREFERRED ALTERNATIVE

The following describes in detail the mitigation program for the Preferred Alternative that shall be committed to and implemented by the Metropolitan Washington Airports Authority (MWAA) to mitigate impacts resulting from the Preferred Alternative. This mitigation program consists of measures and programs that will be implemented by MWAA to reduce impacts in the following environmental categories:

- Noise,
- Water Quality,
- Cultural Resources,
- Wetlands,
- Floodplains, and
- Construction.

The mitigation program was developed to comply with pertinent laws and regulations, after consideration of public comments, and through coordination with affected parties and applicable agencies. The mitigation program outlines specific mitigation program elements for each environmental impact category for which mitigation is warranted. The elements of MWAA's program are provided in **Table C-1** and discussed in detail in the following paragraphs. Several of the mitigation measures assume the opening of the runway as a scheduling benchmark for implementation. For purposes of this mitigation program, the opening of the project is considered to be the first day that the runway is used for air carrier service.

**TABLE C-1  
SUMMARY OF MITIGATION PLAN - PREFERRED ALTERNATIVE**

| <b>Element</b> | <b>Environmental Impact Category</b> | <b>Element #</b> | <b>Recommended Mitigation Elements</b>                                                                                    | <b>Estimated Schedule</b>                                                                | <b>FEIS Section</b> |
|----------------|--------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------|
| 1              | Noise                                | 1.1              | Acquisition of two residences south of IAD.                                                                               | Concurrent with construction of Runway 12R/30L.                                          | 6.3.1               |
| 2              | Water Quality                        | 2.1              | Create airport-compatible stormwater detention areas for attenuation of stormwater runoff.                                | Concurrent with construction of new impervious areas.                                    | 6.3.2               |
|                |                                      | 2.2              | Install oil/water separators.                                                                                             | Concurrent with construction of new impervious areas.                                    | 6.3.2               |
|                |                                      | 2.3              | Glycol deicing treatment.                                                                                                 | Concurrent with construction of new impervious areas.                                    | 6.3.2               |
|                |                                      | 2.4              | Erosion and sediment control.                                                                                             | Concurrent with all construction activities                                              | 6.3.2               |
| 3              | Cultural Resources                   | 3.1              | Project MOA.                                                                                                              | Executed prior to FAA's issuance of the Record of Decision (ROD).                        | 6.3.3               |
|                |                                      | 3.2              | Phase III Data Recovery and/or Preservation-in-Place of NRHP eligible archaeological resources.                           | Prior to construction phase of the airport expansion.                                    | 6.3.3               |
| 4              | Wetlands                             | 4.1              | Wetland and stream mitigation program.                                                                                    | Initiate upon Section 404/401 permit approvals.                                          | 6.3.4               |
| 5              | Floodplains                          | 5.1              | Limit fill within floodplain areas.                                                                                       | Concurrent with airport expansion.                                                       | 6.3.5               |
|                |                                      | 5.2              | Provide airport-compatible stormwater detention areas for peak discharge attenuation and floodplain storage compensation. | Concurrent with airport expansion.                                                       | 6.3.5               |
| 6              | Construction Impacts                 | 6.1              | Construction and environmental control provisions (BMPs).                                                                 | Develop concurrently with plans and specifications for each airport development project. | 6.3.6               |

Source: URS Corporation, 2005.

The primary responsibility for implementation of the mitigation program element lies with MWAA. Where appropriate, approval and concurrence from agencies having jurisdiction will be obtained. These agencies include:

- Army Corps of Engineers (USACE),
- Virginia Department of Environment Quality (VDEQ), and
- Environmental Protection Agency (EPA).

The Federal Aviation Administration (FAA) will oversee MWAA's implementation of the mitigation program and will put conditions in the grant agreement as necessary upon completion of the mitigation program elements by MWAA. It should be noted that MWAA is in the process of designing the proposed project at Washington Dulles International Airport (IAD). Since the design is in the preliminary stage, sufficient data is not available to identify and fully describe all mitigation measures that will be implemented by MWAA, particularly with regard to water quality, wetlands, and floodplains. Since the construction of the proposed project will include the requirement for MWAA to obtain multiple Federal, state and local permits, the details of the specific mitigation measures including their quantity, location, and performance characteristics will not be finalized until the actual permits are granted. The following are the mitigation measures that MWAA is currently in the process of designing.

***ELEMENT 1: NOISE***

**Element 1.1 - Acquisition of Two Residences South of IAD**

MWAA has committed to appropriate mitigation, in terms of acquisition, of the two residential parcels significantly impacted by noise due to the Preferred Alternative according to the year 2025 noise analysis. The residences are located south of IAD along Vance Road. MWAA is committed to this mitigation program as long as these properties remain in residential use when Runway 12R/30L is constructed.

## ***ELEMENT 2: WATER QUALITY***

Water quality mitigation measures are contained in their entirety in the Stormwater Management Plan and permitting documents prepared by MWAA for the Preferred Alternative. These mitigation measures, summarized in the following section of this Final Environmental Impact Statement (FEIS), include the following:

### **Element 2.1: Create Stormwater Detention Areas for Attenuation and Treatment of Stormwater Runoff (This element of the mitigation program will be implemented during the construction phase and maintained during the operational phase of the Preferred Alternative)**

Based on the stormwater management design plans, which are currently being developed by MWAA, the stormwater management system will include the stormwater collection system, stormwater BMPs, which comprise drainage channels, or water quality swales, and stormwater treatment wetlands, referred to as BTUs. The purpose of the water quality swales and the BTUs is to treat deicing fluid in stormwater runoff not otherwise contained at centralized deicing pads, and to remove total phosphorus from stormwater, as required by VDEQ.

Design criteria include constraints on facility location and type due to safety criteria established by FAA and due to potential environmental impacts to wetlands, and constraints related to facility sizing for both stormwater quantity and quality control established by VDEQ, the Virginia Department of Conservation and Recreation (VDCR), and the Virginia Department of Transportation (VDOT).

Low Impact Development (LID) concepts are being developed to meet VDEQ water quality requirements. The principles of LID require that runoff be minimized by promoting infiltration and treatment as near as possible to where runoff is generated. To apply this principle, several measures have been incorporated into the drainage design to the extent possible:

- Increase the time of travel over vegetated surfaces in infield areas by limiting the number of inlets per infield area.

- Minimize slopes in infield areas to the minimum (1.5 percent) allowed by FAA Advisory Circular (AC) 150/5300-13 *Airport Design*; to maximize the time of concentration and maximize infiltration while keeping these areas dry. Provide underdrains in localized areas that may be subject to ponding such as near inlets to eliminate standing water that could interfere with maintenance and to reduce wildlife attractiveness.
- Allow ponding in infield areas, as allowed by FAA AC 150/5320-5B Airport Drainage, for large events; storms of 10-year return frequency are allowed to pond for up to 1 hour.
- Use vegetated channels or water quality swales to convey runoff from the runway/taxiway complex to the BTUs.
- Consistent with the Virginia Stormwater Management Handbook Minimum Standard 3.13, use minimum slopes in the water quality swales, to slow discharge and promote infiltration; and provide underdrains to promote infiltration and to keep them dry for the purpose of routine mowing. For control of sediment and debris, low check dams would be provided at selected locations upstream of BTUs and discharge to receiving streams.
- Use BTUs, which in effect are large-scale bioretention facilities, to treat stormwater discharges for deicing fluid and total phosphorus.

Based on MWAA's preliminary design, six different drainage systems are being developed, each comprising drainage inlets in the infield areas between runway and taxiway, drain pipes carrying flows under the runway or taxiway, followed by a water quality treatment system. The BTUs are located offline from the water quality swales, with diversion provided by a weir in the channel and connecting pipe. The water quality swales discharge to the nearest existing stream.

The water quality swales and associated diversion weirs are being sized to fully contain the runoff generated by the first half inch of rainfall from impervious surfaces as required by the Virginia Stormwater Handbook, but for several swales and BTU diversion systems it fully contains up to the 1-inch storm. The locations of the BTUs and associated water quality swales were driven by the need to provide adequate vertical drop from the drainpipe from infield areas to the ultimate outfall, assuming a target minimum slope of 0.5 percent in the water quality swale, and a preferred slope of 1 percent. It is recognized that 0.5 percent slopes are not ideal to maintain positive flow in the vegetated channels, so the water quality swales may be provided with underdrains in localized areas to avoid standing water that might hinder efficient mowing operations or pose a hazardous wildlife attractant.

In addition to the water quality swale and BTU systems providing water quality capture and treatment of runoff from half-inch rainfall, water quantity control is being evaluated for the 1- and 10-year storm events, per the Virginia Stormwater Management Handbook, through two regional dry detention ponds. A requirement for the detention facility is that it must be sited on IAD property. The detention facility will be split into two separate facilities in order to support this requirement. The westernmost of the two facilities receives flow from three of the BTUs. It is located at the southern edge of the airport property at the headwaters of an unnamed tributary to Cub Run.

For the western detention facility, the 1-year storage volume is 5.11 acre-feet and the 10-year storage volume is 15.71 acre-feet. For the eastern detention facility, the 1-year storage volume is 13.43 acre-feet and the 10-year storage volume is 38.52 acre-feet.

**Element 2.2: Oil/Water Separators (This element of the mitigation program will be implemented during the operational phase of the Preferred Alternative.)**

Runoff from maintenance areas is anticipated to be the largest potential source of oil and grease contamination of area surface waters. MWAA's drainage design contains provisions for the location and installation of oil/water separators that will serve to minimize, if not virtually eliminate, the potential for oil and grease contamination to enter receiving surface waters.



**Element 2.3: Deicing Runoff (This element of the mitigation program will be implemented during the operational phase of the Preferred Alternative.)**

As described in detail in the *Comprehensive Deicing Concepts for Washington Dulles International Airport* (MWAA, 2002c), MWAA is developing a centralized deicing area at IAD that will increase the capture of spent aircraft deicing fluid (ADF) and increase the glycol concentration of the recovered ADF so that more of it will be suitable for recycling. This system will be designed concurrently with the design of the runway and taxiway areas. Currently, there are no regulations in effect that are specific to the treatment of glycol that is released into the environment. In the event that regulations are established, MWAA is committed to fully complying with the requirements established in the regulations.

**Element 2.4: Erosion and Sediment Control (This element of the mitigation program will be implemented during the construction phase of the Preferred Alternative.)**

MWAA's design documents incorporate the Virginia requirements for erosion and sediment control as specified in the *State of Virginia Sediment and Erosion Control Handbook*. The design will ensure that properties and waterways downstream from the proposed project will be protected from erosion due to increases in the volume, velocity, and peak flow rate of stormwater runoff.

Prior to construction activities, MWAA will submit a permit application for coverage under a Virginia Pollutant Discharge Elimination System (VPDES) Construction Permit to VDEQ. The permit will include the site's construction plans and specifications and will provide minimum requirements for stormwater management and sediment and erosion control during construction activities. Erosion and sediment controls such as silt fences, bank stabilization, and stormwater runoff control will be included in the construction plans and specifications.

**ELEMENT 3: CULTURAL RESOURCES**

**Element 3.1: Project Memorandum of Agreement (This element of the mitigation program was completed prior to the issuance of FAA's ROD.)**

FAA and MWAA have entered into a Memorandum of Agreement (MOA) with the Virginia State Historic Preservation Officer (SHPO) for the Preferred Alternative. This document specifies the process for continued consultation regarding the planned Tier 3 Concourse Improvements and measures to mitigate adverse effects to archaeological resources due to the construction and operation of the FAA's Preferred Alternative. A copy of the executed MOA is contained in Appendix B of this ROD.

**Element 3.2: Archaeological Resources Phase III Data Recovery and/or Preservation-in-Place of NRHP Eligible Archaeological Resources (This element of the mitigation program will be implemented prior to the construction phase of the Preferred Alternative.)**

Fourteen archaeological sites in the Area of Potential Effect (APE) were evaluated for their eligibility for listing in the NRHP. Prior to the publication of the FEIS, one site (44FX2840) had been determined to be eligible for listing in the NRHP and concurrence had been received from the Virginia SHPO. Three additional sites (44LD538; 44LD539 and 44LD1042) were determined by FAA and MWAA to be eligible for listing in the National Register of Historic Places (NRHP). Since the publication of the FEIS, the SHPO has concurred that site 44FX2840, as well as sites 44LD538 (Historic Component), 44LD539 (Historic Component), and 44LD1042 (Historic Component) are eligible for listing in the National Register. In consultation with the SHPO it has been determined that the Prehistoric Component of site 44LD539 was ineligible for listing in the National Register. The remaining 10 sites have been determined to be ineligible for listing in the NRHP. For each of the effected sites, Phase III Data Recovery and/or Preservation-in-Place will be undertaken in accordance with stipulations outlined in the MOA. A copy of the Final MOA is contained in Appendix B of this ROD. The Phase III Data Recovery efforts will mitigate the adverse effects of the proposed action by extraction of the data from the sites.

***ELEMENT 4: WETLANDS***

**Element 4.1: Create, Restore, Enhance, and Preserve Wetlands and Streams (This element of the mitigation program will be implemented during the construction phase and maintained during the operational phase of the Preferred Alternative.)**

As discussed in Section 6.2.4 of the FEIS, to comply with the Clean Water Act (CWA) Section 401/404 compensatory mitigation requirements for unavoidable wetland and stream impacts, MWAA has purchased credits from mitigation banks whose service area includes the airport property and is located in accordance with FAA AC 150/5200-33A. The use of mitigation banking is an appropriate approach that is encouraged by FAA AC 150/5200-33A, and is consistent with USACE, EPA, and VDEQ regulations and policies. In anticipation that the intended use of the IAD property would eventually be fulfilled by expanding the airport operations to accommodate the projected demand for aviation services, MWAA proactively submitted a request for proposal (RFP) for the development of mitigation bank credits. Subsequently, MWAA purchased 200 wetland acre-credits from two mitigation banks, whose service areas include IAD: Cedar Run Wetlands Mitigation Bank and Licking Run Mitigation Bank (see Figure 6.4-1 in the FEIS).

### **Cedar Run Wetlands Mitigation Bank**

The Cedar Run Wetlands Mitigation Bank is located in Prince William County, Virginia, and its service area includes regional drainage areas defined by Hydrologic Unit Codes (HUCs) 02070008, 02070010, and portions of 02070011. Since IAD is located within HUCs 02070008 and 02070010, it is located within the mitigation bank's service area. The banking instrument for the mitigation site was signed by representatives of the USACE, EPA, U.S. Fish and Wildlife Service (USFWS), and VDEQ, all of whom participated on the Mitigation Bank Review Team (MBRT) (see Appendix I-4 of the FEIS). Actual use of these credits will be part of the permit decision. The Cedar Run Wetlands Mitigation Bank has proven to be successful and is currently contributing wetland functions and values within its service area, which includes IAD. MWAA currently holds a bill of sale for 112 wetland acre-credits from this bank (see Appendix I-4 of the FEIS).

### **Licking Run Mitigation Bank**

The Licking Run Mitigation Bank is located in Fauquier County, Virginia, and its service area includes HUCs 02070008, 02070010, and portions of 02070011. Since IAD is located within HUCs 02070008 and 02070010, it is located within the mitigation bank's service area. The banking instrument for the mitigation site was signed by representatives of the USACE, EPA, and VDEQ, all of whom participated on the MBRT (see Appendix I-4 of the FEIS). Actual use of these credits will be part of the permit decision. The Licking Run Mitigation Bank has proven to be successful and is currently contributing wetland functions and values within their service area, which includes IAD. MWAA currently holds a bill of sale for 88 wetland acre-credits from this bank (see Appendix I-4 of the FIES).

As discussed in Section 6.2.4 of the FEIS, 273.0 wetland acre-credits and 60,858 stream linear feet-credits would be required to offset the unavoidable wetlands and stream loss and wetlands conversion from the Preferred Alternative. The Preferred Alternative construction activities will be developed in phases in the following order: north-south Runway 1W/19W, Tier 3 Terminal Concourse, east-west Runway 12R/30L. Prior to construction of a given phase, a detailed mitigation plan will be prepared specifying the number of mitigation credits to be applied to mitigate the wetland impacts, and the bank or banks from which these credits are being applied. Based on the projected required

compensation, MWAA can immediately fully compensate the Runway 1W/19W wetland impacts with its existing purchased mitigation credits. MWAA is required to obtain the additional wetland acre-credits to mitigate the wetland impacts associated with the Tier 3 Terminal Concourse and east-west Runway 12R/230L phases. MWAA will initiate a similar process to obtain the additional required wetland acre-credits that was successfully employed with the Cedar Run and Licking Run mitigation banks. As with these previous projects, participation by representatives of the USACE, EPA, USFWS, and VDEQ will be accomplished to establish appropriate locations for additional wetland and stream mitigation sites. Similarly, MWAA is committed to issuing a RFP to develop stream linear feet bank credits to mitigate for stream impacts associated with the Preferred Alternative. In addition, FAA and MWAA will consider recommendations by Loudoun and Fairfax counties to locate mitigation sites, to the extent possible, within the same watersheds that wetlands impacts would occur. The final locations of mitigation sites and the required compensatory mitigation credits will be determined through the CWA Section 401/404 permitting process.

#### **MWAA Mitigation Commitment**

MWAA believes the Wetland and Stream Mitigation Plan summarized above is consistent with USACE, EPA, and VDEQ regulations and policies. Further, the proposed mitigation meets VDEQ recommended compensation ratios as outlined in their permit guidance documents. Off-site location of wetland and stream replacement, restoration and enhancement within Cedar Run and Licking Run represents the MWAA's intent to fully address Section 404 and 401 requirements. The USACE/VDEQ Section 404 Joint Permit Application (JPA) was submitted to the respective agencies by MWAA on April 20, 2005. A revised JPA package was submitted on August 30, 2005 containing additional information requested by the reviewing agencies. Submittal of the JPA documents to the jurisdictional agencies represents full commitment by MWAA that the proposed Wetland and Stream Mitigation Plan will be implemented. The final mitigation plan is being developed in consultation with the USACE, EPA, VDEQ, USFWS, and FAA. The final locations of the mitigation sites and the required compensatory mitigation credits will be determined through the CWA Section 401/404 permitting process.

## ***ELEMENT 5: 100-YEAR FLOODPLAINS***

**Element 5.1: Limit Fill Within Floodplain Areas and Element 5.2: Provide Stormwater Detention Areas for Peak Discharge Attenuation and Floodplain Storage Compensation (This element of the mitigation program will be implemented during the construction phase and maintained during the operational phase of the Preferred Alternative.)**

As part of this mitigation measure, MWAA has committed to undertake a detailed hydraulic analysis of the pre- and post-development conditions to ensure flood stages and flows will be maintained as required by applicable regulations. This analysis will be conducted during the design stage for the proposed project and its associated drainage system. The proposed stormwater management system described in Section 6.3.2 of the FEIS will be effective in maintaining peak flow rates below existing rates and making up for some of the floodplain storage volume lost in the on-site floodplain.

The Preferred Alternative is anticipated to result in impacts to approximately 39 acres of 100-year floodplain. Although every effort will be made during the final design stage to avoid and minimize floodplain impacts, floodplain volume lost from the Preferred Alternative may have to be recovered in order to prevent flooding areas downstream and upstream of IAD. MWAA's stormwater management design includes the overall drainage concepts described in Section 6.3.2 of the FEIS that include design elements to reduce the likelihood of downstream flooding as a result of the Preferred Alternative. These flood control elements include the stormwater collection system, stormwater BMPs, and stormwater treatment facilities. The facilities will be located on IAD property in accordance with FAA AC 15-5370-2C. MWAA's preliminary design calculations show that the 100-year peak discharge will increase from 6,224 cubic feet per second (cfs) for existing conditions to 6,586 cfs for the Preferred Alternative (a net increase of 362 cfs). For the western detention facility, the 1-year storage volume is approximately 5.11 acre-feet and the 10-year storage volume is approximately 15.71 acre-feet. For the eastern detention facility, the 1-year storage volume is approximately 13.43 acre-feet and the 10-year storage volume is approximately 38.52 acre-feet.

As stated previously, the stormwater management design analyses are not yet completed. The proposed floodplain mitigation measures will be designed so that the 100-year water surface elevations do not increase by more than is allowable under applicable regulations. The exact design will be determined after detailed hydraulic analysis and through the permitting process, which is still underway.

## ***ELEMENT 6: CONSTRUCTION IMPACTS***

### **Element 6.1: Construction and Environmental Control Provisions (BMPs) (This element of the mitigation program will be implemented during the design and construction phase of the Preferred Alternative.)**

Mitigation measures included in this element, which will be used by MWAA to minimize impacts during construction, include BMPs such as erosion control and stormwater runoff control and drainage and crossing structures. To compensate for unavoidable impacts to wetlands, mitigation through creation, restoration, enhancement, and preservation have been proposed. Wetland mitigation measures, coordinated with the USACE and VDEQ, are discussed in Section 6.3.4 of the FEIS.

In terms of construction-related air quality and noise mitigation, all on-airport construction activities will adhere to FAA AC 150/5370-10, *Standards for Specifying Construction of Airports* and *Virginia Department of Transportation Standard Specifications for Roads and Structures*. Several control measures to mitigate construction impacts are available should construction activities warrant mitigation:

- Exposing the minimum area of erodable earth,
- Temporary mulch with or without seeding,
- Water trucks or other means of using moisture for dust control,
- Covered haul trucks on public roadways,
- Dust stabilizers or penetration asphalt on haul roads,
- Plastic sheet coverings,
- Routing truck traffic to avoid residential areas,
- Schedule the timing of truck traffic to not disturb heavy traffic flows,
- Maintaining construction vehicles and using reduced speeds,
- Suspending certain activities during high-wind conditions, and
- Limiting work hours to avoid sleep disturbance impacts to residential land uses in proximity to construction activities.