

CHAPTER 1.0

INTRODUCTION

1.1 ABOUT THE WASHINGTON DULLES INTERNATIONAL AIRPORT DRAFT EIS

The Federal Aviation Administration (FAA) prepared this Draft Environmental Impact Statement (DEIS) to identify the potential environmental effects associated with the construction and operation of proposed improvements to the Washington Dulles International Airport (IAD). In 1985, FAA, the owner and operator of IAD at the time, completed a Master Plan Study that identified a comprehensive program for the development of IAD. FAA leased IAD to the Metropolitan Washington Airports Authority (MWAA) in 1987, and MWAA assumed operational responsibility and control of the IAD property (the lease is for 80 years, or until 2067). Elements of IAD's long-term development program have been refined through planning studies completed in 1990 (*Capacity Plan*), 2002 (*Capacity Review and Alternatives for the Fourth and Fifth Runways*), and 2003 (*Updated Activity Forecasts and Simulation*). In 2002, MWAA prepared an updated Airport Layout Plan (ALP) depicting the major development projects recommended in the 1985 Master Plan Study and subsequent planning studies. MWAA has submitted the ALP to FAA for review and environmental approval in connection with its intent to seek Federal funds to implement projects recommended in the Master Plan Study that will enable IAD to safely and efficiently accommodate existing and future levels of aviation operational demand. Revisions of the ALP have been submitted to the FAA in 2003 and 2004. Unconditional approval of the ALP will not be determined until the environmental evaluation represented by the Environmental Impact Statement (EIS) has been completed. Based on the EIS, FAA will issue a Record of Decision (ROD) that contains findings, explanations of the findings, and a decision on whether FAA may or may not provide the approvals and Federal actions necessary to facilitate the proposed project(s), based on projected environmental impacts.

The proposed project identified in the ALP (and the subject of this EIS) would require the U.S. Department of Transportation to request that the Department of Commerce convey to MWAA a property interest in land that is administered by the National Oceanic and Atmospheric Administration (NOAA)/ National Weather Service (NWS). The proposed project would also require the relocation of certain NOAA/NWS Sterling facilities (SRI International, 2004). The NOAA/NWS facilities that would be relocated are those located along Thunder Road, which include the Weather Forecast Office (WFO), Weather Surveillance Radar (WSR-88D); Upper Air Inflation Building (UAIB); National Data Buoy Center Test Beds; Buildings 15, 16, and 17; and associated structures and equipment antennas (collectively "the NOAA/NWS facilities"). NOAA is responsible for determining the appropriate site for relocation of its NWS facilities, and to evaluate and disclose the potential environmental impacts associated with the relocation alternatives and Preferred Alternative. As such, NOAA will prepare 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 will be coordinating their respective decisions regarding any required property transfer to MWAA and relocation of NOAA/NWS facilities.

1.1.1 THE PROPOSED IMPROVEMENTS TO IAD

MWAA is proposing to implement airside and landside improvements to IAD that are depicted on the 2004 ALP 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 this DEIS, features a new parallel north-south runway, approximately 9,473 feet long by 150 feet wide, and a new parallel east-west runway, 10,500 feet long by 150 feet wide. The proposed north-south runway would be located on the western side of the airport and is referred to as Runway 1W/19W for the purpose of this DEIS only to minimize confusion with the existing runway designations. Ultimately, the proposed north-south runway would be designated Runway 1L/19R, while the existing Runway 1L/19R would be redesignated Runway 1C/19C. The proposed east-west runway would be located on the southern side of the airport and designated Runway 12R/30L (existing Runway 12/30 would be redesignated as Runway 12L/30R). The proposed project also includes associated taxiways and navigational aids (NAVAIDS) for the proposed runways, property acquisition, Tier 3 Concourse development, and extension of the Automated People Mover (APM). [Section 1.2.1](#) of this DEIS contains a more detailed description of the proposed project.

1.1.2 LEAD AGENCY'S ENVIRONMENTAL RESPONSIBILITIES

In recognizing the importance of protecting the environment, the U.S. Congress passed the National Environmental Policy Act of 1969 (NEPA) so Federal agencies would consider the environment during their decision-making processes. NEPA requires Federal agencies to treat environmental impact as a primary criterion in evaluating a proposed project. It also requires Federal agencies to analyze and consider alternatives to, and the environmental impacts of, their proposed actions, to disclose and consider mitigation for those impacts, and to provide interested parties with an opportunity to participate in the environmental evaluation process. In addition, Federal agencies must consider the "No-Action" Alternative. Furthermore, when selecting a preferred alternative, NEPA requires Federal agencies to consider a proposed action's environmental consequences and to balance them with the agency's statutory mission and responsibilities and technical and economic factors.

FAA is responsible for complying with NEPA whenever an airport sponsor seeks approval of an ALP or proposed projects necessitating a revision that were not previously identified on an ALP. FAA reviewed IAD's 2002 ALP (subsequently revised in 2003 and 2004) and determined that an EIS would be the most appropriate document for the agency to fulfill its obligations under NEPA and FAA Orders 1050.1E (FAA, 2004) and 5050.4A (FAA, 1985b). In May 2002, FAA published a Notice of Intent (NOI) (Federal Register Document 02-12661) to prepare an EIS and hold Scoping meetings for the proposed projects at IAD (see [Appendix K](#), Public Involvement Information). Public and agency scoping meetings were held in June 2002 to receive comments regarding the scope of the analysis to be prepared in the EIS and to identify any potential environmental impacts and public/agency concerns regarding the proposed project. In October 2003, FAA conducted two Public Workshops to present the results of the preliminary Purpose and Need, Alternatives Evaluation, and Affected Environment to the public. In January 2004, FAA conducted an Agency Workshop to present the results of the preliminary Purpose and Need, Alternatives Evaluation, and Affected Environment to interested agency representatives. In April 2004, FAA conducted a series of public workshops that presented preliminary environmental impacts associated with the alternatives retained for detailed evaluation in the EIS. Additional meetings are planned for

subsequent phases of the EIS project. FAA has established a comprehensive Public Information Program to ensure that the public has opportunities to provide comments throughout the course of the EIS process (see [Appendix K](#), Public Involvement Information and [Appendix L](#), Consolidated Comment Response Database).

1.1.3 COOPERATING AGENCY

A cooperating agency is an agency that has jurisdiction by law or special expertise regarding any environmental impact resulting from a proposed project or reasonable alternative. The U.S. Army Corps of Engineers (USACE) - Norfolk District was invited by FAA and agreed to participate as a cooperating agency for this DEIS because of its jurisdiction by law and special expertise on wetlands, and the fact that they will need to make a decision on a Federal Action (issuance of a permit).

The proposed projects at IAD have the potential to impact waters of the United States (wetlands) that fall under the jurisdiction of the USACE. For this reason, this DEIS examines the potential environmental impacts to wetland resources and possible mitigation concepts. The involvement of the USACE in conceptual mitigation planning at this stage will facilitate the subsequent preparation of permits that may be required after the preparation of detailed design plans.

The goal of the cooperating agency process is to ensure the agencies assist FAA in the preparation of the EIS such that the document contains all the information each cooperating agency needs to fulfill its NEPA responsibilities and for the agencies to make independent decisions on resources and issues under their respective purview(s). As such, the USACE began participation in the NEPA process at the earliest appropriate time, made staff support available, has exchanged relevant information throughout the EIS process, submitted independent recommendations, and assisted FAA in developing responses to "designated resource" comments received on the DEIS and Final EIS (FEIS). The USACE was not responsible, however, for the actual preparation of any portion of the EIS or related technical reports.

Specific responsibilities of the cooperating agency for this EIS include:

- The USACE will provide oversight, guidance, and comment to assure the EIS's consistency for compliance with all appropriate tenets of 33 Code of Federal Regulations (CFR) and 40 CFR, respectively. This will include, but not be limited to; the Clean Water Act (CWA) (33 U.S. Code [USC] 1252 *et seq.*); the Clean Air Act (CAA) (42 USC 7401 *et seq.*); and all other Federal laws, statutes, orders, regulations, and guidance within their jurisdiction by law or special expertise.

1.2 BACKGROUND INFORMATION

Operation of IAD and Ronald Reagan Washington National Airport (DCA) was transferred to MWA from the FAA in a lease agreement that became effective on June 7, 1987. The lease was originally for 50 years; however, it was recently extended 30 years to the year 2067. Consistent with the Federal legislation that authorized the lease (Title 49, Section 49104), MWA 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 Study for IAD was completed by FAA in 1985. This document describes and depicts a preferred development plan for IAD that consists of a five-runway system, including three north-south parallel runways and two parallel east-west runways. The current development plan shown on the 2004 IAD ALP (and evaluated in this DEIS) is the culmination of more recent planning efforts accomplished by MWAA. These efforts validate the findings of the 1985 Master Plan Study and confirm the need for a five-runway system at IAD to safely and efficiently accommodate the future levels of operational demand. The current IAD ALP ([Figure 1.2-1a](#) and revision shown on [Figure 1.2-1b](#)) depicts a new 9,473-foot north-south runway, a new 10,500-foot east-west runway, and Tier 3 Concourse. Through this EIS process, MWAA is requesting FAA's unconditional approval of both new runways and associated projects.

1.2.1 PROPOSED PROJECT DESCRIPTION

In 2002, MWAA submitted an updated ALP to FAA (with subsequent revisions in 2003 and 2004), which depicted a long-term development program to help the airport meet the air transportation needs of the metropolitan Washington region. FAA granted conditional approval of the IAD ALP pending environmental review of the projects depicted on the ALP. This meant that environmental review was not required until MWAA proposed to implement a depicted project and actually submitted a proposal to FAA, which MWAA has now done for the parallel north-south and east-west runways, Tier 3 Concourse, property acquisition, and related projects. The ALP, which reflects the existing and future facilities on the airport, includes elements for the development of the new parallel north-south Runway 1L/19R (noted as Runway 1W/19W in this EIS), parallel east-west Runway 12R/30L, and Tier 3 Concourse that are the subject of this EIS.

The goal of MWAA is to develop an airport facility that provides adequate capacity to users thereby avoiding unacceptable delays, which would be satisfied by three widely spaced parallel north-south runways and two widely spaced parallel east-west runways. To meet the near-term goals of MWAA, both the north-south and the east-west runway systems need to provide the ability for aircraft to conduct dual simultaneous independent operations under Instrument Meteorological Conditions (IMC) and Visual Meteorological Conditions (VMC). To meet the mid- to long-term goals, however, the proposed north-south runway system must provide for the ability for aircraft to conduct triple simultaneous independent operations in both IMC and VMC. The east-west runway system allowing for dual simultaneous independent operations will meet the mid- to long-term goals of MWAA. The development program as proposed by MWAA is illustrated on [Figure 1.2-2](#) and consists of the following direct and connected projects that MWAA envisions would be constructed between 2006 and 2010:

- Construction and operation of new Runway 1W/19W to a length of approximately 9,473 feet, a width of 150 feet, and a separation of 4,300 feet from the centerline of existing Runway 1L/19R;
- Construction and operation of new Runway 12R/30L to a length of 10,500 feet, a width of 150 feet, and a separation of 4,300 feet from the centerline of existing Runway 12/30;
- Acquisition of 448 acres of property on the west side of the airport to accommodate FAR Part 77 clearance surfaces, a Runway Protection Zone (RPZ), and buffer area;

- Construction and operation of a new full-length parallel taxiway on the east side of new Runway 1W/19W;
- Construction and operation of taxiway connectors between new Runway 1W/19W and existing Runway 1L/19R;
- Construction and operation of a new full length parallel taxiway on the north side of new Runway 12R/30L;
- Construction and operation of taxiway connectors between new Runway 12R/30L and existing Runway 12/30;
- Construction and operation of cross-field taxiways between existing Runway 30 and Taxiway Juliette (“J5”);
- Installation and operation of NAVAIDS and lighting for new Runways 1W/19W and 12R/30L including high-update radar/monitoring equipment (if necessary), localizer antenna, glide slope antenna, Precision Approach Path Indicator (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);
- Tier 3 Concourse development;
- Construction and operation of the automated people mover from the Tier 2 Concourse to the Tier 3 Concourse;
- Relocation of National Oceanic and Atmospheric Administration (NOAA)/National Weather Service (NWS) Sterling facilities including the Weather Surveillance Radar (WSR-88D), Weather Forecast Office (WFO), NDBC Test Bed facilities, and Upper Air (UA) Testing Facilities Group. NOAA will prepare 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 will be coordinating their respective decisions regarding any required property transfer to MWA and relocation of NOAA/NWS facilities;
- Obtain State Water Quality Section 401 certification and USACE Section 404 wetland fill permit prior to start of construction and implementation of mitigation measures;
- Changes to air traffic procedures; and
- Support facility improvements.

During the EIS study timeframe, MWA may also undertake other projects that are not directly connected to MWA’s proposed project. These projects have what is called “independent utility” from the proposed projects listed above. Independent utility means that these projects are not related in purpose or function to the proposed projects under consideration in the EIS. The need for these projects is not connected in any way to the proposed project and they could be developed independently by MWA, regardless of whether any of the proposed projects listed above are developed or not. These “independent utility” projects are considered to be “cumulative projects.” [Section 5.23](#) of this DEIS discusses the potential impacts associated with the cumulative projects, which include:

- Tier 2 Concourse improvements;
- Construction and operation of the APM from the Main Terminal to Concourse B, and Concourse B to Tier 2 (Concourse C/D);

- On-airport roadway improvements;
- Reconstruction of existing Runway 12/30;
- Construction and operation of new Airport Traffic Control Tower (ATCT);
- IAD Metro Rail line link; and
- Smithsonian National Air and Space Museum opened in 2003.

This EIS will consider the proposed project's direct and indirect impacts for all project elements within the development timeframe. This will include the cumulative evaluation of impacts to 21 environmental categories due to past, present, and reasonable foreseeable actions within the EIS study area, as discussed in [Chapter 5.0](#), Environmental Consequences.

1.2.2 AIRPORT HISTORY

Washington National Airport (now Ronald Reagan Washington National Airport [DCA]) was opened in 1941 to serve the air travel needs of the metropolitan Washington area. However, the need for a second airport to serve the metropolitan Washington region became apparent shortly after the end of World War II. To meet the growing demand for airport capacity, Congress passed the second Washington Airport Act of 1950 (and amended it further in 1958) to provide for "...the construction, protection, operation, and maintenance of a public airport in or in the vicinity of the District of Columbia."

After a thorough study of many possible locations around the region, a 10,000-acre site, 26 miles west of Washington, D.C., was selected by President Eisenhower in 1958. The site, located in Fairfax and Loudoun counties in Virginia, was surrounded by open farmland, and was far enough from other airports to provide adequate airspace for arriving and departing flights.

The size of the new site allowed for an airport, the first in the country designed for commercial jets, to be buffered from its neighbors. Only 3,000 acres of the 10,000 acres were graded for the new airport and boundaries were established at least 8,000 feet from the end of all runways. In addition, 1.5 million tree seedlings were planted around the perimeter to provide the facility with a 1,000-foot-wide "green belt." This planning, in conjunction with the actions of local governments to properly zone the land around the site, helped the new airport to be a good neighbor in the Virginia countryside.

The building of the airport started on September 2, 1958. IAD's terminal building opened 4 years later, in 1962. The terminal was a compact, two-level structure, 600 feet long and 200 feet wide. While it was built without extensions onto the airfield for aircraft loading, it was designed to be expanded up to 320 feet at either end (this expansion was actually completed 34 years later in 1996). When the airport was completed, IAD had two north-south parallel runways, each 11,500 feet long, 150 feet wide, and separated by 6,700 feet, and an east-west runway, 10,000 feet long and 150 feet wide. All runways had standard instrument landing systems (ILS) for landings, high-speed taxiway turnoffs to increase runway availability, and the most modern lighting systems available at the time. In addition, all runways had paved shoulders, 25 feet wide, ensuring clean surfaces designed to prevent jet engines from ingesting dirt and debris.

IAD was built to accommodate up to six million passengers. The first expansion was completed in November 1977 with the widening of the jet-aircraft parking ramp. In 1982, new passenger waiting areas were added to the concourse level, and a new baggage make-up area was added below to handle increased airport activity. Midfield Concourses C and D, five cargo buildings, a hotel located on airport property, and economy parking lots were also added through the 1980s. The Main Terminal was expanded in accordance with the original design in 1996. In 1998, the first permanent concourse was completed, and a concourse for regional aircraft opened in 1999.

In 2002, IAD served more than 45,000 passengers per day and nearly 17 million passengers annually 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 several cargo carriers, 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 (MWWA Internet Site, September 21, 2004).

1.2.3 AIRPORT DESCRIPTION

IAD is located approximately 26 miles west of downtown Washington, DC, along the border of Fairfax and Loudoun counties in Virginia. The airport serves the metropolitan Washington region. The region's core metropolitan area is termed the Washington DC-Maryland-Virginia-West Virginia Primary Metropolitan Statistical Area (PMSA). The Washington PMSA includes more than 5 million people and encompasses Washington, DC, 18 counties and 6 cities in the Commonwealth of Virginia, and states of Maryland and West Virginia. The region has historically been a government center; however, areas surrounding Washington, DC (including those around IAD) have attracted a large concentration of transportation, technology, telecommunications, and health service providers within the past 30 years. An airport location map and an airport vicinity map are provided on [Figures 1.2-3](#) and [1.2-4](#), respectively.

Currently, IAD has three runways: Runways 1L/19R and 1R/19L oriented in a north-south direction, and Runway 12/30, oriented in an east-west direction. Land area within the IAD property boundary encompasses approximately 11,000 acres.

Runway 1L/19R, located along the western side of the airport, is 11,500 feet long and 150 feet wide, with runway centerline lights, a Medium Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) lights, Touchdown Zone (TDZ) lights, Runway Visual Range (RVR) equipment, Precision Approach Path Indicator (PAPI) lights, and a Simplified Short Approach Lighting System with Runway Alignment Indicator (SSALR) lights, and TDZ, PAPI, and RVR on the Runway 19R end. These lighting/NAVAIDS systems allow Runways 1L and 19R to have CAT I Instrument Flight Rules (IFR) capability. Runway 19R is currently in the process of upgrading to CAT II IFR capability.

Runway 1R/19L, located on the east side of the terminal area, is also 11,500 feet long and 150 feet wide, with runway centerline lights, a High Intensity Approach Lighting System with Centerline Sequenced Flashers (ALSF-2) and TDZ, RVR, and a PAPI on the runway ends, and a MALSR and TDZ, RVR, and PAPI on the Runway 19L end. These lighting systems/NAVAIDS allow Runway 1R to have CAT IIIB IFR capability and Runway 19L has CAT I IFR capability.

Runway 12/30, located south and west of the terminal area, is 10,500 feet long and 150 feet wide, with runway centerline lights, a MALSR and TDZ, and PAPI on the Runway 12 end, and Runway End Identifier Lights (REIL), and PAPI on the Runway 30 end. These lighting systems/NAVAIDS allow Runway 12 to have CAT I IFR capability.

A detailed description of the above referenced lighting/NAVAID systems is presented in [Section 4.2.6.1](#) of this DEIS.

The main passenger terminal at IAD is 1,240 feet in length and 1.1 million square feet. The terminal (originally designed by Eero Saarinen) serves as a distinguishing feature of the airport. Two permanent aircraft concourses exist at IAD. Concourse B was opened in 1998 and recently expanded in 2003 to 540,000 square feet, serving 27 aircraft positions. Concourse A was opened in 1999 to serve 36 regional aircraft. Concourses C and D are temporary, and will be replaced by a new permanent midfield concourse (Tier 2) in the future. Passengers are transported from the main terminal to the concourses with mobile lounges (plane mates) or directly to aircraft on the ramp with mobile lounges. To support the growing cargo market at IAD, the airport has 6 cargo facilities (in 4 separate buildings) located northwest of the main terminal. Two fixed base operators (FBOs) are located on the airfield to serve the general aviation community.

1.2.4 IAD'S ROLE

IAD is designated as a large hub primary commercial service airport in the FAA's *National Plan of Integrated Airport Systems* (NPIAS), accounting for at least one percent of total revenue passengers enplaned (those that board an aircraft at an airport) by U.S. flag air carriers in the United States. In 2002, 34 commercial passenger air carriers and several air cargo airlines served the airport. 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. Baltimore-Washington International Airport's (BWI) service area overlaps IAD's in the metropolitan Washington region; however, BWI has constraints to growth that prevent it from solely accommodating the increasing aviation demands of the region.

1.2.5 RECENT RELATED STUDIES AT IAD

In 1985, FAA (owner and operator of IAD at the time) completed a comprehensive master plan study called the Washington Dulles International Airport Master Plan Study. The study consisted of an examination of aviation forecasts, demand-capacity analysis, and facility requirements. Development projects were recommended in the Master Plan Study to meet the future landside and airside needs of IAD. The most significant of the airport improvements recommended in the 1985 Master Plan Study include the following:

- Acquire and reserve approximately 900 acres of land to the west of IAD for future construction of a third full-length north-south runway parallel to and at least 2,500 feet west of Runway 1L/19R;
- Acquire and reserve approximately 200 acres of land to the south of IAD for future construction of a full-length crosswind runway parallel to and at least 4,300 feet south of Runway 12/30;

- Construct additional taxiways, aircraft parking aprons, and improvements to the existing runways and taxiways as required to improve airfield operations; and
- Construct a third north-south runway (parallel to and at least 2,500 feet west of existing Runway 1L/19R).

The 1985 IAD Master Plan Study is still the most current master plan on file with FAA. However, MWWA has recently undertaken several highly detailed planning efforts to re-examine the need for and more accurately define the appropriate locations and timing for implementation of the proposed fourth and fifth runways at IAD. In 1990, MWWA, FAA, and the Air Transport Association (ATA) completed the *Washington Dulles International Airport - Capacity Plan*. The study recommended the following airfield improvements to accommodate future aviation demand:

- Construction of a new north-south runway, located 3,500 feet west of existing Runway 1L/19R (providing the ability to conduct triple simultaneous independent operations during IMC); and
- Construction of a new east-west runway, located 4,300 feet south of existing Runway 12/30 (providing the ability to conduct dual simultaneous independent operations during IMC).

Although the *Capacity Plan* recommended that the new north-south runway provide the capability of performing triple simultaneous independent operations during IMC with a separation of 3,500 feet from the closest existing north-south runway, FAA had not yet approved the procedure.

MWWA completed a Final Environmental Assessment (EA) - Land Acquisition at the airport in 1993. The proposed action included the acquisition of property interests in 880 acres of land adjacent to the airport's western boundary belonging to the NOAA/NWS Sterling Research and Development Facility (NOAA/NWS Sterling) to accommodate a new north-south runway separated 3,400 feet from the existing Runway 1L/19R. The EA retained the assumption that triple simultaneous independent operations during IMC may occur with 3,400 feet separation; however, the procedure was not approved by FAA at that time. FAA issued a Finding of No Significant Impact (FONSI) in 1993. This procedure is still not approved by FAA at a runway separation of 3,400 feet. The land transfer (from NOAA/NWS Sterling to MWWA) occurred after the issuance of the FONSI. As a result, research offices and related buildings were moved onto the remaining NOAA/NWS Sterling property.

In 2002, MWWA completed a study titled *Capacity Review and Alternatives for the Fourth and Fifth Runways at Washington Dulles International Airport*. This study recommended the following airfield improvements at IAD to allow it to accommodate existing and future levels of aircraft operational activity:

- Construction of a new 10,250-foot-long north-south runway, located 4,000 feet west of existing Runway 1L/19R (providing the future ability to conduct triple simultaneous independent operations during IMC and operation of high-update radar/monitoring equipment); and
- Construction of a new 10,000-foot-long east-west runway, located 4,300 feet south of existing Runway 12/30 (providing the ability to conduct dual simultaneous independent operations during IMC).

The *Capacity Review and Alternatives for the Fourth and Fifth Runways at Washington Dulles International Airport* also included a Benefit-Cost Analysis that showed a positive net present value of the ultimate five-runway system alternative at IAD.

In 2002, MWAA submitted an updated ALP (with subsequent revisions in 2003 and 2004) depicting the proposed development program. The ALP included:

- Construction of a new 9,473-foot-long north-south runway, located 4,300 feet west of existing Runway 1L/19R (providing the future ability to conduct triple simultaneous independent operations during IMC with high-update radar/monitoring equipment); and
- Construction of a new 10,500-foot-long east-west runway, located 4,300 feet south of existing Runway 12/30 (providing the ability to conduct dual simultaneous independent operations during IMC).

The current ALP (2004) shows a reduced north-south runway length from the latest MWAA planning study in 2002. This reduction in runway length accounts for siting criteria and protection of localizer equipment (used in ILS) near the Runway 1W end. Also, the runway separation of 4,300 feet between north-south runways reflects FAA's guidance in Advisory Circular (AC) 150/5300-13 concerning triple simultaneous independent operations.

The 2003 *Updated Activity Forecasts and Simulation* took into account revised forecasts of aviation activity. Simulation analysis with the updated forecasts (reflected a short-term decrease in aviation demand) further validated the need for new north-south and east-west runways (as shown on the 2004 ALP) by 2010.

MWAA completed the *Sensitivity Analysis for North/South Runway Benefit-Cost Analysis, 2003 FAA TAF Forecast* in 2003, based on forecast revisions of FAA's Terminal Area Forecast (TAF) that are detailed in [Section 1.3](#). The updated Benefit-Cost Analysis for the north-south runway showed that the runway was still economically feasible (benefit-cost ratio of 4.98).

In February 2004, SRI International prepared a report titled *Analysis of Potential Effects of Dulles International Airport Proposed Runway Expansion Project on the National Oceanic and Atmospheric Administration/National Weather Service Weather Forecast Office and Sterling Research and Development Center, Sterling, Virginia - Revised Final Report* (see [Volume 4](#) of this DEIS). The report concluded that certain facilities, including the WFO, WSR-88D, Test Beds, and UA facilities, would need to be relocated as result of the proposed improvements at IAD that are part of this EIS. NOAA will prepare 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 will be coordinating their respective decisions regarding any required property transfer to MWAA and relocation of NOAA/NWS facilities.

1.3 FORECASTS OF AVIATION ACTIVITY

Forecasts of aviation activity for IAD were updated in 2000 by MWAA and in 2003 to account for the events of September 11, 2001, and more recent economic conditions. The 2003 MWAA forecasts were developed at the same approximate time as FAA's own TAF, which are completed by FAA on an annual basis. Coordination between FAA and MWAA during development of each of the respective forecasts indicated that MWAA's 2003 forecasts varied from FAA's TAF by more than 10 percent, which exceeds the variance level typically deemed acceptable by FAA.

However, FAA's TAF is prepared in a "top-down" manner. That is, the forecasts are based on a broad scale, nationwide perspective of what is occurring in the national aviation system. The forecast update prepared by MWAA took into account IAD and region-specific data that were more suitable for airport-specific planning purposes.

The MWAA forecasts are based upon local social and economic conditions. Although FAA's TAF and MWAA's forecasts differ, FAA has determined that MWAA forecasts are reasonable and that FAA will use MWAA forecasts in this EIS for analytical purposes. The MWAA forecasts for future aviation activity at IAD are presented in [Table 1.3-1](#). These forecasts are used throughout the EIS in the establishment of the Purpose and Need in [Chapter 2.0](#), the Alternatives evaluation in [Chapter 3.0](#), and the Environmental Consequences analysis in [Chapter 5.0](#). The forecast assumptions are available for review at FAA's Washington Airports District Office (ADO) in Dulles, Virginia, and are included as [Appendix A](#) of this DEIS.

**TABLE 1.3-1
FORECAST ACTIVITY LEVELS**

Calendar Year	Aircraft Operations	Enplaned Passengers
2002	372,636	8,515,498
2003	388,550	8,893,440
2004	388,976	9,447,450
2005	405,691	10,001,460
2006	433,624	10,896,204
2007	463,689	11,870,992
2008	496,053	12,932,987
2009	530,895	14,089,988
2010	568,410	15,350,500

Source: *Washington Dulles International Airport Updated Activity Forecasts and Simulation*, HNTB Corporation, November 2003.