

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
SOUTHERN REGION  
ATLANTA, GEORGIA

RECORD OF DECISION

FOR

PROPOSED NEW PARALLEL RUNWAY  
AND ASSOCIATED WORK

AT

MIAMI INTERNATIONAL AIRPORT  
MIAMI-DADE COUNTY, FLORIDA

Date: December 1998

# TABLE OF CONTENTS

<b>Section</b>	<b>Title</b>	<b>Page</b>
I	<a href="#"><u>Introduction</u></a>	1
II	<a href="#"><u>Background</u></a>	2
III	<a href="#"><u>Proposed Federal Actions and Approvals</u></a>	3
IV	<a href="#"><u>Purpose and Need</u></a>	4
V	<a href="#"><u>Alternatives Analysis</u></a>	6
VI	<a href="#"><u>FAA Involvement</u></a>	11
VII	<a href="#"><u>Major Environmental Impacts and Mitigation Measures</u></a>	12
VIII	<a href="#"><u>Agency Findings</u></a>	24
IX	<a href="#"><u>Decision and Order</u></a>	26
Attachment	<a href="#"><u>List of Reports for the Record</u></a>	29
Appendix A	<a href="#"><u>New Tables 4-11A, 4-11B, 4-12, and 4-13</u></a>	30

## I. INTRODUCTION

This Record of Decision (ROD) announces final agency determinations and approvals prepared by the Federal Aviation Administration (FAA) in response to a proposal from the Miami-Dade County Department of Aviation (MDAD), airport sponsor for the Miami International Airport (MIA). These determinations and approvals are necessary to support the proposed construction and operation of a new 8,600-foot air carrier runway and related actions at MIA. An important international airport in the national system of airports, MIA serves as the primary commercial service airport and international hub in south Florida.

The ROD is prepared and issued by the FAA to announce and document certain Federal actions and agency decisions, in compliance with the National Environmental Policy Act of 1969 ("NEPA"), the implementing regulations of the Council on Environmental Quality, and FAA Orders 1050.1D and 5050.4A.

This ROD, which approves the airport sponsor's proposal and describes the reasoning supporting this decision, provides the final determinations or approvals for the following:

- Airport Layout Plan depicting the proposed new runway,
- Construction and operation of the proposed new parallel east-west runway (8,600 feet X 150 feet),
- Construction and operation of a full-length parallel taxiway (75 feet wide),
- Construction and operation of associated connecting taxiways,
- Installation of related visual navigational aids (Visual Approach Slope Indicator Lights, Runway End Identification Lights, etc.),
- Installation of associated runway and taxiway lighting,
- Relocation of some north support/cargo facilities, and
- Environmental mitigation required for the project(s).

The proposed new runway would not have, nor has the FAA approved, an Instrument Landing System (ILS).

The FAA prepared and issued an Environmental Impact Statement (EIS) for the proposed project on September 18, 1998. The MDAD cooperated with the FAA to develop an EIS for the proposed project by providing information as needed. MDAD had submitted for final approval a revised ALP, showing a new runway on MIA's north side, which was conditionally approved by the FAA in June 1994. The "condition" was that the FAA would not consider giving full approval, and the ALP would not be deemed to have been properly evaluated, until completion of a thorough and appropriate environmental impact investigation, in this case, an EIS.

At the close of the EIS and ROD process, MDAD is expected to submit a preapplication for federal assistance and a Letter of Intent (LOI) for eligible project work.

The project was proposed to enhance MIA's capacity to handle current and short-term forecast air passenger and cargo demand, through the addition of a runway whose primary purpose is to accommodate arriving aircraft. The runway was proposed to reduce already damaging levels of delay, with a desirable by-product of reducing some existing noise and improving some air quality measures.

## II. BACKGROUND

The FAA has worked for a number of years with the local metropolitan planning organizations, South Florida Regional Planning Council, airport sponsor, and other local planning agencies, to develop solutions to the related problems of inadequate capacity and increasing delays which are forecast for MIA. MIA was ranked the seventh busiest airport in the nation in 1997 and is currently at (or near) maximum capacity during peak periods. The potential for system-wide delays that result from problems at MIA, because of its position as a major component of the national airports system, is also cause for concern.

As disclosed in Section 1 of the Final Environmental Impact Statement (FEIS) for the proposed project, MIA's present airport runway configuration -- two parallel runways and one crosswind runway -- cannot accommodate current traffic without significant airside delays. The airport sponsor states that annual delays and delay costs will continue to grow at a substantial rate if no improvements are made to airfield capacity. In addition, unacceptable delay levels are projected for the short term, with increasing demand.

The FAA funded and participated in the development of an Airport Master Plan Update (AMP) for MIA, completed in 1994. The key finding was that additional runway capacity is needed at MIA. In December 1997, the FAA Office of System Capacity (ACE) completed a *Capacity Enhancement Plan Update* (CEPU) for the top 100 airports. To conduct this study for the MIA area, the FAA assembled a team, composed of representatives of FAA, MDAD, and the airlines and general aviation serving Miami, Florida. The mission was to study the benefits of the various possible improvements that had potential to enhance capacity and reduce delay at MIA. This plan ultimately recommended the construction of a new runway to enhance capacity, specifically, an air carrier runway, 8,600 feet long and 800 feet north of existing Runway 9L-27R.

MIA is considered a U.S. gateway to Central and South America and is the principal departing airport for the Caribbean. MIA is also an important connecting point between Europe and Central and South America. MIA continues to be the busiest airport in Florida, serving 14.9 million international and 18.8 million domestic travelers in 1996. Thirty-one airlines (13 domestic and 18 foreign) provide scheduled all-cargo services to MIA. In 1996, MIA handled 1.5 million tons of international cargo and 378,000 tons of domestic cargo. Aviation forecasts developed in the AMP predict an increasing volume of international traffic and cargo through MIA into the 21<sup>st</sup> century.

System capacity is one of the major issues facing aviation in the United States today, and it has become a problem at MIA. The FAA supports the objectives of the proposed project -- to add enough capacity to handle current and short-term forecast delay problems -- as justified, in light of increasing aeronautical demand at MIA and overall limitations on air transportation system capacity.

### III. PROPOSED FEDERAL ACTIONS AND APPROVALS

The FAA's approval and issuance of the environmental findings in the FEIS are one part of a variety of actions that take place prior to actual project construction. The majority of these actions require specific FAA approval, although the U.S. Army Corps of Engineers is responsible for permitting processes under Section 404 of the Clean Water Act and the U.S. Environmental Protection Agency (EPA) is responsible for National Pollutant Discharge Elimination System (NPDES) permits under the Federal Water Pollution Control Act (FWPCA, also referred to as the Clean Water Act, or CWA), as amended.

Most of the FAA actions relate to (i) removing the existing environmental condition on MIA's ALP (before unconditional FAA approval was possible for the proposed new runway that appears on the ALP, environmental study and completion of the NEPA process was necessary) and (ii) providing federal funding to the airport sponsor for eligible airport development projects. The necessary determinations, approvals, and associated actions are summarized below.

- Determination that based on environmental analysis and findings in the FEIS, the FAA lifts its conditional approval and replaces it with "approval" for that portion of the revised MIA ALP depicting the proposed new runway (49 USC Section 47107(a)(16)).
- Determination that air quality impacts associated with the proposed new runway conform to applicable air quality standards under the Clean Air Act, as amended (42 U.S.C. Section 7506, Section 176(c)(1)), and 40 CFR Part 93).
- Determination of "no undue burden" (i.e., unusual circumstances) barring the airport operator from obtaining a National Pollutant Discharge Elimination System (NPDES) permit from EPA for stormwater and wastewater discharges (Clean Water Act, section 402(p), as amended).
- Approval of various navigational aids (navaids) required for the proposed new runway (49 U.S.C. Section 44502(a)(1)). Specifically, approval of new Visual Approach Slope Indicators (VASI), Runway End Identification Lights (REIL), and other associated navaids.
- Determination of the effects of the proposed new runway on the safe and efficient utilization of airspace.
- Determination that proposed new runway conforms to FAA design criteria. Approval of construction plans and specifications, including relocation of FAA power and control cables serving MIA airport facilities. Approval of protocols for maintaining coordination among sponsor offices, construction personnel, and appropriate FAA program offices, as required, to ensure safety during construction.
- Approval 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 runway (involves a system for routing arrival and departing traffic; facility procedures for assigning departure headings and handling simultaneous approaches; updating position responsibilities and training for air traffic controllers; designing, establishing, and publishing standardized flight operating procedures, including instrument approach procedures and standard instrument departure procedures (49 U.S.C. Section 40103 (b)). Since the proposal does not include ILS capability, ILS procedures are not listed.
- Approval of Letter of Intent (LOI) to fund eligible development.
- Determination of project eligibility for Federal grant-in-aid funds (49 U.S.C. Section 47101, et seq.) for site preparation, runway, taxiway, runway safety area, and other airfield construction, navigation and landing aids, and environmental mitigation.

- Determinations under 49 U.S.C. Sections 47106 and 47107 pertaining to FAA funding of airport development (including environmental approval [42 U.S.C. Sections 4321-4347, and 40 CFR Sections 1500-1508], and approvals under various executive orders discussed in Section IX of the ROD.

#### IV. PURPOSE AND NEED

The sponsor's *Master Plan Update* projected significant activity growth over the next 20 years for all major components of the MIA airport system. MIA is the largest primary commercial service airport in south Florida. It is considered the U.S. gateway to Central and South America and is a principal departing spot for the Caribbean. Miami also is an important connecting point between Europe and Central and South America.

MIA is currently at, or near, maximum capacity during peak periods. In fact, MIA operated at near capacity in 1997 and is expected to exceed capacity by the year 2000. The current increase in airport traffic stretches the ability of the existing airfield runway and taxiway system to efficiently accommodate the present demand. This condition is further complicated by the high level of urbanization surrounding MIA and the resultant physical constraints of expanding to adjacent offsite areas.

The *Master Plan Update* identified the need for a new runway within the existing airport boundaries to extend airfield capacity through the 2007 to 2010 time frame. The *Master Plan Update* showed that the existing airfield configuration was inadequate to accommodate MIA's capacity needs. In other words, assuming the 680,000 operations forecast for the year 2004, each aircraft operation would be subject to an average annual all-weather delay of 13.4 minutes as the airfield is now configured. Assuming an industry standard of 10 minutes average maximum delay for each operation (see Section 1.3.4 in the FEIS for the airfield demand capacity analysis), 13.4 minutes is excessive. In addition, average delays would increase rapidly above 13.4 minutes per operation after 2004, without additional airport capacity.

The sponsor's proposal for a new runway, either commuter or air carrier, was meant to address this problem. The proposed runway appears on MIA's *Airport Layout Plan*, conditionally approved by the FAA in June 1994 and subject to environmental review under NEPA once the sponsor submitted a formal project proposal. The FEIS responds to the sponsor's identification of need as identified in the *Master Plan* and the sponsor's proposal, in 1995, to construct a new air carrier runway.

The need for improvements at MIA had already been documented in various forecasts that showed increasing aviation demand. First, demand forecasts were presented in the *1994 Master Plan Update*; they represent unconstrained future activity levels. Second, these forecasts were updated in the January 1996 *Dade County Aviation System Plan* (Draft). Third, these forecasts were further analyzed and verified in the *Strategic Terminal Planning Study for MIA* (January 1997). Finally came the 1997 *FAA Terminal Area Forecast (TAF)*, which, for MIA, generally supported the trends established by the *Master Plan Update*. That is, the TAF forecasts for MIA were within 10 percent of the forecasts already in use in this EIS for both passengers and aircraft operations. (The 1997 TAF for MIA is included in the FEIS, Appendix C).

The EIS process, started in 1995, and particularly the noise analysis, was already underway when the 1996 *Dade County Aviation System Plan* (Draft) forecasts were issued. The analysis had progressed even further when the TAF forecasts were issued. In light of the newly issued forecasts, the FAA had to decide whether it was appropriate to continue the noise analyze using the *Master Plan Update* forecasts, as updated by the *Aviation System Plan* for passengers and operations (these forecasts had been the most recent available when the lengthy analysis began in March 1995), or restarting the analysis with slightly newer data.

After substantial review, the FAA concluded that the 1994-96 data were consistent with the trends forecast by the *Master Plan Update*, that the airport environment represented in the later forecasts was not significantly different, that the analysis in this EIS would not have been materially different if the 1994-

1996 data had been used, and that the original forecast data would still yield realistic measures of environmental impact. The FAA decided to continue the analysis, using the Master Plan Update forecasts, that was already underway. (Complete summaries of MIA passenger and operations data prepared by MDAD for 1994-96 appear in the FEIS, Appendix C.) This base year data remains applicable for 1998 because MIA aircraft operations since 1995 are below the forecasted operations.

Next, the FAA had to review delay standards, since the purpose of the proposed runway was to add enough capacity to manage the short-term forecast activity level and decrease delay. It was assumed that peak hour delays can often be as high as three times the average delay levels, depending on the amount of activity scheduled during peak periods of the day. It was also assumed that in general, as average delay reaches 10 minutes, hub operations such as those in effect at MIA begin to break down. It was finally determined that to define maximum airside capacity for MIA, a delay range of 6-10 minutes was the appropriate measure, with 6 minutes as the "maximum acceptable" and 10 minutes as the "maximum tolerable" delay per aircraft operation.

Applying the delay measure to the forecasts, and based on the analysis conducted for the MIA *Capacity Enhancement Plan Update* and the aviation forecast used in the FEIS, the 10 minute per operation delay level was anticipated to be reached between 2001 and 2002. Furthermore, according to the forecasts used in the FEIS, an average annual all-weather delay of 13.4 minutes per operation would be reached by about 2004. (MDAD supplied data indicating that at 13.4 minutes, the delay cost to the air carriers serving MIA would be \$321.5 million dollars annually.) This level of delay is beyond the maximum tolerable level of 10 minutes per operation identified in the *Master Plan Update*.

The analysis conducted for the 1994 *Master Plan Update* and the recently published *Capacity Enhancement Plan Update* reached similar conclusions related to capacity and delay. Both the *Master Plan Update* and the *Capacity Enhancement Plan Update* also suggested that major airfield improvements would be necessary around the year 2000, to avoid these undesirable delays and attendant problems. Both suggested that a new air carrier runway would provide the greatest savings, among alternatives, in average delays and annual delay costs. Tables 1-8 and 1-9 in the FEIS demonstrate the delay savings that would be expected from the addition of a runway and compares airport capacity for the alternatives.

With this information, the FAA set the forecast horizon necessary to investigate the environmental impact of the sponsor's proposal and under various alternatives to that proposal (see next Section). While the *Master Plan Update* identified the need to extend capacity to the 2007 to 2010 timeframe, the forecast in the FEIS extends only over the ten-year period between 1995 and 2005. This is because the EIS study began in 1995, when the airport sponsor requested that the FAA evaluate the proposal to enhance short-term capacity at the MIA. Therefore, the 1995 airport environment was the baseline condition for this EIS (see ROD Section VII.A).

Typically, an environmental analysis is most accurate over the shortest possible time frame. For an environmental analysis, the FAA considers 10 years as being a reasonable horizon to predict impacts. Therefore, in 1995, when the study began, it was reasonable to select the years 2000 and 2005 for future year analysis in this EIS. With the occurrence of various unavoidable delays during the EIS process, the FAA had to consider whether the study was still viable at the 2005 horizon. The FAA decided that it was not necessary to extend the analysis to 2010 because with the virtually immediate need represented in the forecasts, the 2005 future year analysis would suffice to show whether or not any of the alternatives were justified, as well as what the environmental impacts would be.

Based on all of the above factors, it appears that MIA, as is, will not be able to accommodate the forecast demand and will sustain long per-operation delays. The capacity constraints that have been identified, and that cannot be resolved under the existing airfield configuration, would continue to impact both air carrier operators, through increased operational cost, and passengers subjected to delays. Miami's position as a center for international commerce, including its standing as provider of aviation services to cruise ships and other businesses that rely on MIA for transportation, would also be affected. Without improvements, annual delays and delay costs would continue to grow at a substantial rate, as demand

increases. Because MIA is an important component of the national system of airports, delays could have a system-wide impact.

The FAA has therefore determined that MIA needs a solution to its short-term delay and capacity problem, and that system capacity increases needed to fill demand should be accomplished there. The purpose of the proposed project, to meet current and forecast air carrier and passenger demand at MIA and to enhance the capacity of the national system of airports, is accepted. The sponsor's proposed new runway is one possible remedy; that and other alternatives were investigated and are discussed in the next section.

## V. ALTERNATIVES ANALYSIS

Between 1991 and 1994, the MDAD prepared a comprehensive master plan study, the *Airport Master Plan Update* (AMP). The study developed forecasts of aviation demand through the year 2010 and proposed an airport development plan to enable MIA to meet future projected demand levels. The forecasts indicated to MDAD that development of a new runway at MIA was needed by the year 2000. A facility requirement analysis was accomplished to identify the shortfalls of the existing airport and to identify development items that would enable MIA to effectively solve the shortfalls and meet projected demand levels. The analysis examined major components of the airport, including runways, airspace, terminals and ground transportation.

The AMP also included a comprehensive evaluation of possible development options (these options were re-evaluated by the FAA in the FEIS; see below). Through a process of elimination, the AMP evaluation concluded that MIA needed a new east-west parallel runway system capable of accommodating air carrier operations. MDAD determined that a new parallel air carrier runway would allow the airport to accommodate air traffic demand through the year 2010. The AMP study culminated with the identification of MDAD's preferred airport development plan: construction of a new parallel runway on the north side of the airport. This evolved into MDAD's proposal to the FAA to construct an 8,600 foot air carrier runway, which triggered the EIS process.

In determining the best way to resolve the delay and capacity problems identified in the Section IV above, the FAA considered numerous alternatives in addition to MDAD's proposal. Most of the following alternatives were addressed in the AMP, but all were reevaluated by the FAA in greater detail in the FEIS:

- New Airport Site.
- Service from Other Airports.
- Other Modes of Transportation.
- Combination of Off-Site Alternatives.
- Demand Management Strategies.
- No-Action.
- MIA Airfield Expansion Alternatives.

Most of the above alternatives were not reasonable and viable; they were either too expensive, not practical, not timely, or not responsive to the need identified in the previous section. After analysis of each of the available alternatives, the FAA determined that only three viable alternatives remained. These were the "No Action", and two "MIA Airfield Expansion Alternatives," i.e., the proposed air carrier runway and a shorter commuter runway at the same north side location. These alternatives were subjected to thorough environmental scrutiny, which is detailed in the FEIS.

While the FAA recognizes that detailed, in-depth consideration was given to only three alternatives, consideration was also given to other feasible alternatives, to the extent that they were reasonable and viable, before the FAA reached a decision on its preferred alternative.

Following is a summary of all the initially considered alternatives.

## **NEW AIRPORT SITE**

The FAA considered the potential for siting a new airport in south Florida. Political, civic and business leaders in the Miami area sought for years to find an appropriate replacement site to provide adequate airport facilities to satisfy forecasted aviation demand at MIA. Many sites were studied, but the environmentally sensitive land in and around South Florida restricts the areas suitable for a new air carrier airport. Eventually, after a lengthy process, a new airport site was identified by area leaders, but the plans for a new replacement airport, even at the identified preferred site, were abandoned, because of the associated environmental impacts were unacceptable. Now, this and other potential sites are no longer available. Even if a site were available, the time it would take to develop a new airport is too long to meet the short-term need for additional capacity at MIA. The New Airport Site was therefore eliminated from further consideration, based on the unfavorable previous airport site studies and the long number of years needed to develop a new site.

## **SERVICE FROM OTHER AIRPORTS**

The FAA also considered the possibility of shifting some of MIA's air passenger or cargo demand to an airport or airports other than MIA. While the FAA does not control air carrier and cargo corporate decision making or business choices, it is recognized that the delay environment at MIA will contribute to carriers' business decisions about future use of that airport. In the meantime, however, the passenger and cargo carriers have expressed commitments to their continuing presence at MIA, to the extent the airport facilities permit. They have made and continue to make substantial economic and capital investment in their MIA facilities. The FAA did not assume, nor will it speculate on, the likelihood of a change in the carriers' declared course of maintaining their commercial enterprises as they are now constituted at and projected for MIA.

Nevertheless, nine other airports were studied in this context. These airports were Fort Lauderdale-Hollywood International Airport, Palm Beach International Airport, Fort Lauderdale Executive Airport, Opa Locka Airport, Opa Locka West Airport, Kendall Tamiami Executive Airport, Dade Collier Training & Transition Airport, Homestead General Aviation Airport, and Homestead Regional Airport (formerly Homestead Air Reserve Base). None of them could accommodate a significant amount of MIA's air traffic. This alternative was eliminated, because it offered no realistic way to resolve the central issue, i.e., which, if any, improvements should be accomplished at MIA to provide increased capacity.

## **OTHER MODES OF TRANSPORTATION**

The FAA considered whether other forms of transportation, particularly rail, could absorb some of MIA's passenger or cargo demand. This alternative, however, is not competitive with air travel in terms of either domestic or international destination travel time. The proposed future high-speed rail service to Ft. Lauderdale, Palm Beach, Orlando and Tampa is the only mode that could potentially meet the travel time criterion for some of this demand, but this rail system is still a distant prospect. This alternative was rejected for failure to address the need for relief described in the previous section.

## **COMBINATION OF OFF-SITE ALTERNATIVES**

The FAA considered the possibility of combining off-site alternatives to provoke a major shift of MIA traffic to other regional airports. To obtain a satisfactory result, such an action would not only require voluntary realignment by the airlines of their operations but also extensive joint coordinated efforts by the various airport users as well as numerous local, state and federal jurisdictions and agencies. The problems associated with obtaining consensus for such a move, including the fact that there is no support for it, would be considerable. The airlines and passengers at MIA would likely resist any effort to divert flights to other airports. Most airlines, American Airlines among them, use a hub and spoke operation that concentrates operations at one airport. American Airlines has a major hubbing operation at MIA, and several other airlines operate smaller hubs. *This option does not promise to reduce demand at MIA, and is therefore not viable or potentially responsive to the need identified in the previous section.*

## DEMAND MANAGEMENT STRATEGIES

The FAA considered the possibility of developing demand management strategies tailored to address the operating environment at MIA. A demand management strategy attempts to address the imbalance between demand and capacity by redistributing air traffic. The goal is to flatten the peaks, creating a more even demand throughout the day and evening in order to avoid peak period back-ups. Demand management techniques include:

- Slot allocations.
- Congestion pricing through the use of differential access fees for arrivals/departures for established time periods.
- Charges as a function of gross weights.
- Limits on the number of arrivals per hour.

The implementation of such measures at MIA would require joint and coordinated efforts by the MDAD with the FAA, U.S. DOT, and airport users. Although some strategies might be more effective at MIA than others, the affected groups have not come to consensus on what strategies would be acceptable. Demand management also raises major policy issues; any one of these strategies may conflict with existing airline agreements as well as Federal law. The implementation of demand management strategies is considered to be impractical for MIA and unresponsive to delay and capacity needs at this time.

## NO-ACTION ALTERNATIVE

The FAA considered the possibility of no airfield improvements at MIA over the 10-year horizon. While on the surface, it would appear that “no action” would not meet the need to increase capacity or decrease delay, changes in aircraft use over the planning horizon, for example, might lead to a different conclusion. In any case, the FAA is required by regulation to submit this alternative to detailed environmental analysis. This alternative was therefore retained for analysis through the EIS process under all NEPA categories.

## MIA AIRFIELD EXPANSION ALTERNATIVES

MIA’s most critical current need was identified as the need for additional airfield capacity to reduce aircraft delays. Absent any practical way to create a new airport, other competitive modes of transportation, comparable service at other local airports, comparable service at a combination of off-site regional airports, or useable demand management strategies, the choice presented to the FAA was effectively limited to improving or not improving the Miami International Airport. If the choice was to improve MIA, the only possibility way was utilizing essentially its existing site.

Working with the existing site, MDAD initially developed, evaluated, and considered eight separate alternatives for expansion within the existing airport. Two types of new runway (commuter runway 6,000 feet x 150 feet, or air carrier runway 8,600 feet x 150 feet) were considered. It was necessary for MDAD to develop these airfield expansion alternatives to include features that would avoid airport design and operation problems, and maintain compatibility with the existing MIA environment.

These alternatives are depicted in Figure 2-11 of the FEIS:

**Alternative 1**—Addition of a commuter runway located 800 feet north of existing Runway 9L/27R. This runway would be 6,000 feet long and 150 feet wide and be used by commuter and general aviation aircraft for arrivals and departures. (This alternative was retained for detailed environmental analysis in the EIS.)

**Alternative 2**—Addition of an air carrier runway located 800 feet north of existing Runway 9L/27R. This runway would be 8,600 feet long and 150 feet wide. The new air carrier runway would be used primarily

by landing aircraft with occasional departure operations. (This alternative, MDAD's preferred alternative and formal proposal to the FAA, was retained for detailed environmental analysis in the EIS.)

**Alternative 3**—Addition of a commuter runway located 800 feet north of existing Runway 9R/27L and an air carrier runway located 800 feet north of existing Runway 9L/27R. The proposed commuter runway would be 6,000 feet long and 150 feet wide, and the proposed air carrier runway would be 8,600 feet long and 150 feet wide.

**Alternative 4**—Relocation of existing Runway 9L/27R by 500 feet to the north and addition of a commuter runway 800 feet north of relocated Runway 9L/27R. The proposed commuter runway would be 6,000 feet long and 150 feet wide.

**Alternative 5**—Relocation of Runway 9L/27R by 500 feet to the north and the addition of an air carrier runway 800 feet north of relocated Runway 9L/27R. The proposed air carrier runway would be 8,600 feet long and 150 feet wide.

**Alternative 6**—Relocation of Runway 9L/27R by 500 feet to the north and the addition of a new commuter runway 800 feet north of Runway 9R/27L. The proposed commuter runway would be 6,000 feet long and 150 feet wide.

**Alternative 7**—Closure of Runway 12/30 and addition of two new air carrier runways: one located 800 feet north of Runway 9L/27R and one located 800 feet north of Runway 9R/27L. Each of the proposed air carrier runways would be 8,600 feet long and 150 feet wide.

**Alternative 8**—Closure of Runway 12/30 and addition of a new air carrier runway 800 feet south of existing Runway 9L/27R; addition of a new air carrier runway 1,700 feet north of existing Runway 9L/27R; addition of a new air carrier runway 800 feet north of existing Runway 9R/27L. Each of the proposed air carrier runways would be 8,600 feet long and 150 feet wide.

These alternatives created various configurations of new air carrier and commuter runways to be located 800 feet north and/or south of existing runways. One alternative involved relocating existing Runway 9L-27R 500 feet to the north, and two alternatives would close existing Runway 12-30. The 1994 *Master Plan Update* effectively eliminated all but Alternative 1 as viable, concluding that the commuter runway would provide some immediate relief but would not meet future demand requirements. Except for Alternative 1, the air carrier alternatives were not recommended, because of unfavorable cumulative impacts to airport support components, obviously undesirable noise impacts, or capacity benefits that would be minimal compared to the cost of the alternative.

The FAA reviewed and revalidated MDAD's evaluation methods in the course of the EIS process. The FAA determined that it concurred with the screening criteria and process used by MDAD to reduce the number of alternatives for further evaluation. However, the FAA elected to evaluate Alternative 2, the commuter runway alternative, because it appeared to have the potential to address the need identified in the previous section, that is, to add airport capacity and reduce delay.

## THE FAA'S ANALYSIS AND SELECTED ALTERNATIVE

As summarized above and discussed in Section 2 of the FEIS, the FAA concluded that there were only two reasonable airfield expansion alternatives to consider. These alternatives were: (1) MDAD's proposed project, i.e., Alternative 2, to add a new air carrier runway 800 feet north of existing Runway 9L-27R, and (2) Alternative 1, to add a new commuter runway 800 feet north of existing Runway 9L-27R. The No Action alternative was also considered. These three alternatives were subjected to environmental impact analysis in all NEPA categories. First, the baseline conditions for all NEPA categories were established (see FEIS, Section III); next, detailed analysis, including extensive noise modeling, was performed for the year 2000 and year 2005.

The conditions studied under all NEPA categories were: No Action Baseline; No Action Year 2000; No Action Year 2005; Commuter Runway Baseline; Commuter Runway Year 2000; Commuter Runway Year 2005; Air Carrier Runway Baseline; Air Carrier Runway Year 2000; Air Carrier Runway Year 2005. The properties associated with each were determined and reviewed. They are described in the FEIS; the impacts discovered in the analytic process are detailed in the FEIS, Section IV, and summarized in Section VII, below, of this ROD.

Based on the results of the analysis, the FAA was able to compare the alternatives for environmental impact and select a preferred alternative. The first conclusion was that the demand for air transportation services, including cargo and passenger services, will continue to increase at MIA with or without the project. The second conclusion was that with the project, improvements could be made which would satisfy that demand. The third conclusion was that with the air carrier runway, in particular, demand could be satisfied and, at the same time, significant improvements to the compatibility of the airport with its surrounding community could be produced through environmental enhancements and mitigation built into the project.

Looking at potential improvements to the noise environment (smaller 65 DNL contour, discussed in ROD Section VII), air quality (improved, due to decrease in aircraft delay on the ground, discussed in ROD Section VII), energy (savings of 71,000 gallons per day for the air carrier alternative and 46,000 gallons per day for the commuter alternative), two park sites (Magnolia Park will be outside the 65 DNL contour and Melrose park will be outside the 75 DNL contour with the air carrier alternative - see Table 4-33 in the FEIS), and airport capacity (allowing more daytime and less constraint-driven nighttime operation, discussed in ROD Section VII), the FAA finds that compared to either the No Action or Commuter Runway alternatives, the air carrier runway alternative is the environmentally preferred alternative. The FAA further finds that the air carrier runway fulfills the immediate and short-term need to decrease delay described in ROD Section II.

The FAA's selection of the air carrier runway as preferred alternative incorporates mitigation measures described in the FEIS and later sections of this ROD. Specifically, the air carrier alternative is preferred because it will be a VFR runway, used primarily for arrival aircraft.

Underlying the comparison of alternatives was the information produced by the FAA's SIMMOD analysis, prepared for the Master Plan Update, that shows a new commuter runway will provide sufficient capacity to accommodate 1,700 operations per day (already exceeded as of 1998), with an acceptable level of delay of approximately 6 minutes per operation. At 1,900 operations per day, expected around the year 2000, the delay level would exceed the 10-minute mark.

For the air carrier runway, sufficient capacity would exist to accommodate 1,900 operations per day, with a delay level of approximately 8 minutes per aircraft. At the 2,100 operations per day, which is not expected within the forecast horizon, the air carrier runway would exceed the 10-minute mark. The preferred air carrier alternative would therefore alleviate the unacceptable delay problem.

Having thus considered the policies set forth in 49 U.S.C. Sections 40104 and 47101, the ability of the available alternatives to meet the articulated need, the administrative record which describes the evolution of this decision, and the environmental impact of all the alternatives, the FAA hereby selects as its preferred alternative a new air carrier runway, 8,600 feet, to be located north of and parallel to existing east-west Runway 9L/27R.

The FAA's approval of the development project in this ROD signifies that the project meets FAA standards for approval of the agency actions discussed in Section II of this ROD. It does not, however, signify an FAA commitment to provide financial support for the project. This is a decision which the FAA may not make unless and until the project can be justified under the criteria prescribed by 49 USC 47115(d), under the agency policy announced in the Federal Register on June 24, 1997 (62 Fed. Reg. 34108), and under subsequent revisions to that agency policy.

## VI. FAA INVOLVEMENT

The FAA has been fully involved in the project process. Prior to initiating NEPA review through the EIS process, FAA representatives met with MDAD and the Florida Department of Transportation (FDOT) to discuss the proposed project. Based on the *Airport Master Plan Update* and other available information, FAA determined that an EIS, rather than an EA, was necessary to appropriately evaluate the proposed action. The FAA then selected a consultant to perform the impact analysis.

Using preliminary information prepared by the consultant, the FAA conducted Public and Agency Scoping Meetings. A Notice of Intent to Prepare an Environmental Impact Statement was published in the Federal Register on March 31, 1995. A Notice announcing the Public Scoping Meeting was also published in local newspapers on May 4 and May 7, 1995.

There were two public information meetings. The first Public Information Meeting was an Open House/Workshop conducted in the vicinity of MIA on January 18, 1996, from 5 p.m. to 8 p.m., at the Holiday Inn, Miami International Airport, at North Miami Springs. The main purpose of the meeting was to present the results of the DEIS environmental evaluations, to answer questions and to receive comments on the study. The second Public Information Meeting was conducted at the same location on October 15, 1997, to update the public on the proposed project's status, to hear comments, and to respond to questions and concerns of area residents. Advance notification of both meetings was provided through advertisements in regional and local newspapers and notices mailed to community and neighborhood representatives.

Based on FAA review and comments received through the scoping process, a Draft Environmental Impact Statement (DEIS) was prepared and submitted for federal, state and local review and public comment. Throughout, MDAD responded to numerous requests from FAA for additional information and material needed to validate or supplement existing data. The Notice of Availability of the DEIS appeared in the Federal Register of December 24, 1997. The comment period ended February 20, 1998.

All comments received, from the public as well as from federal, state, and local agencies, were carefully considered by the FAA in the preparation the FEIS. In some cases, the FAA responded by modifying material in the DEIS that now appears in final form in the FEIS. In one case, the FAA added noise monitors in and around the Miami Springs and Virginia Gardens communities; additional data was recorded, analyzed, and described in the FEIS (Section 3.2.1.3.) In all cases, the FAA answered all comments received in response to the DEIS; they appear in Appendices N, O and P, contained in Volume II of the FEIS.

Among the issues raised were why future year analysis extended to 2005 but not beyond. As discussed earlier, MDAD presented its proposal in 1995. At that time, the ten-year planning horizon was reasonable. When delays affected the progress of the EIS, and again when the question was raised through comments, the FAA considered the advisability of retaining 2005 as the outside year. The FAA decided that 2005 was still appropriate, because of the immediacy of the need to reduce delay, the continuing validity of the 1995 base year (in 1998, airport operations had dropped slightly), and because no additional runway construction is included, predicted, or conditionally approved in MDAD's most recent (1994) AMP.

While mitigation concerns were raised about the noise analysis, the FAA was satisfied that since MIA does not have a Part 150 program in place, the best way to encourage noise mitigation was to require such mitigation through use limitations on the proposed new runway (e.g., no ILS, primary arrival designation). These measures are described in Section VII of the ROD and in the FEIS. In addition, the noise analysis for the new runway showed no significant impact to be mitigated. The lack of impact also resolved questions about incompatible land use north of the aircraft, as well as concerns about a particular noise-sensitive school site.

The FAA considered air and water quality concerns not only through additional review of the data analysis in the EIS (which showed no adverse impact and, for air, potential positive impact with the addition of the proposed air carrier runway), but also through a reiteration of air and water quality obligations imposed on MDAD by the FDEP. The FAA considered and resolved hazardous materials concerns once MDAD identified contaminated sites within the potential construction area and demonstrated that these sites were under the jurisdiction of a remediation plan governed by a recently executed Consent Agreement, between FDEP and MDAD.

Two nearby communities, Miami Springs and Virginia Gardens, raised concerns unique to their close location to MIA. In response, the FAA initially added noise monitors to the EIS analysis to rethink single-event noise levels, and later found that in all impact areas, the data supported the conclusion that these communities would not experience significant noise impact from a new runway. As discussed throughout the FEIS and the ROD, the FAA further concluded that the proposed air carrier runway is expected to improve area air quality by decreasing airfield delay, that no noise sensitive site will sustain a significant noise increase (some will experience a decrease in noise), and that overall, the 65 DNL contour will decrease with a new runway.

Questions were raised as to possible development of offsite alternatives, including development of a new airport. The FAA evaluated these, and again found that in the South Florida environment, particularly in light of the sensitive ecology of the area, such offsite development was not feasible. The FAA also concluded that hypotheses about decreasing property values and quality of life occur could not be reliably attributed to the proposed project.

As a result of the environmental process as well as intensive review by all affected FAA departments, and according to the application of FAA standards, criteria, and guidelines to the proposed air carrier runway, the FAA finds MDAD's proposal acceptable under environmental standards.

The FAA furthermore approves the air carrier runway proposed by MDAD for a Visual Flight Rules (VFR) and localizer facilities for a Non-Precision Instrument (NPI) landing role (which is normally exempt from further environmental review). It is not approved for, nor does it include, precision ILS approaches. (If MDAD proposes at any time to provide ILS or MLS precision approaches for this runway, an environmental study would be required before the FAA would consider the proposal.)

The FAA furthermore removes the condition barring approval of the ALP as it applies to the proposed runway. MDAD submitted the MIA Airport Layout Plan (ALP), with the proposed new runway, to FAA in final form as part of the Airport Master Plan (AMP), on June 20, 1994. The FAA reviewed and commented on the draft document for compliance with FAA airport planning and design criteria. The ALP was determined to be compatible with the safe and efficient utilization of airspace. The ALP was further found to be technically acceptable. The ALP was conditionally approved on June 29, 1994, subject to any required environmental review and approval by the FAA. The FAA revalidated the ALP on February 27, 1997, and there were no significant changes made by MDAD. The acceptable environmental finding announced in this ROD is sufficient to satisfy the outstanding condition and allows MIA to proceed with developing the new runway.

## **VII. MAJOR ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

The bulk of the FEIS describes the data gathered in each of approximately twenty environmental impact categories (FEIS, Section 3), and the conclusions about what significance, if any, the data had (FEIS, Section 4). The FAA found no major impacts resulting from any of the three alternatives, but did find some significant impacts. The FAA also found that while in some impact categories, there were no differences in impacts among the categories, in other categories, particularly noise and air quality, the alternatives were distinguishable.

Following is a description of the impacts that were found, of differences among the alternatives as to these impacts, and of the mitigation measures that could reduce those impacts. FAA approval of the sponsor's proposed project is contingent on and assumes the sponsor's incorporation of the mitigation measures described below.

#### A. Noise

To see how noise would change from the 1995 base year through 2005 for each of the alternatives, the FAA entered data into its noise simulation model, the Integrated Noise Model Version 4.11. The model calculates noise exposure in the MIA vicinity in relation to source data, including: aircraft types; aircraft loudness and length of time heard; engine settings; yearly number of aircraft operations; daytime or nighttime aircraft operation; arrival and departure profiles; runway layout, airport flow, and air traffic use of runways and flight corridor. The model projects the extent of noise exposure in DNL values ("DNL" is an average of day and night sound levels in decibels), which can then be graphed onto a geographic map of the MIA vicinity. The outlines of the applicable noise level categories (65, 70, and 75 DNL) appear as contours, with distinct boundaries.

The impacts can then be measured for "significance", i.e., an increase of 1.5 decibels in a noise sensitive area is considered a significant increase in noise. The alternatives can be compared by this measure, and also by the size of the contours, i.e., how many square miles each contour includes. (Additional analysis was also applied to noise-sensitive sites, such as schools.) The contours are also compared by how many people live within the boundaries. Residential use of land outside the 65 DNL is traditionally compatible, but it is not acceptable within the 75 DNL contour. Residential use can be compatible within either the 65 DNL or the 70 DNL with adequate noise attenuation of structures.

In this EIS, the noise model analysis produced the DNL 65, 70, and 75 noise contours for 1995, 2000, and 2005, for each of the three alternatives. The FAA also set up noise monitors at representative sites in Miami Springs and Virginia Gardens to supplement data produced by the INM. Overall, the future 65, 70 and 75 DNL contours include fewer people in noise sensitive sites than the baseline and there were no increases of 1.5 decibels inside the study area. A small area north of the airport projected to be outside the 65 and 70 DNL contours with the no action alternative is projected to be inside the 65 and 70 DNL contours with the commuter or air carrier alternatives, but these areas are not expected to have a significant increase of 1.5 decibels.

##### Results for 2000

The results for the No Action alternative were that compared to the 1995 base year, the number of people and land area within the projected 65 and greater DNL noise contour would be smaller by the year 2000, by approximately 60,000 people and 8 square miles. This decrease can be explained primarily by the mandatory phaseout of Stage 2 aircraft in the commercial fleet, which will be virtually complete in 2000. However, at some point, the No Action alternative would result in more nighttime aircraft operations, because of capacity constraints during the day. Nighttime operations produce more noise, because ambient noise is lower at night, and are not desirable to residents.

A new runway, either commuter or air carrier, would increase capacity, thus allowing more daytime than nighttime operations. Even with the mandatory Stage 2 phaseout, either of the new runways decreases overall noise impact because of the increased capacity. For 2000, the Commuter Runway projection shows the 65 DNL contour is even smaller than the 2000 No Action contour, removing another 11,600 people and 1.8 square miles from the 65 boundaries. The Air Carrier Runway Alternative projection shows a contour that is smaller than the 2000 No Action contour by a decrease of 8,200 people and 1.5 square miles.

##### Results for 2005

By the year 2005, the No Action alternative becomes negative. Between 2000 and 2005, the 65 and greater DNL noise contour expands, adding approximately 20,000 people and 5.2 square miles. This is attributable to a forecast increase in the number of aircraft operations. In 2005, while the contours also expand somewhat for the new runways, the results are better. The Commuter Runway alternative shows

17,600 fewer people and 4.8 square miles less within the 65 DNL boundaries than the No Action boundaries just described. The Air Carrier Runway alternative shows 17,200 fewer people and 4.6 square miles less within the 65 DNL boundaries than the 2005 No Action boundaries.

By the year 2005, the reductions in the 65 DNL compared to the No Action situation are comparable for either runway alternative (4.8 square mile/17,600 people decrease for commuter and 4.6/17,200 square mile for air carrier). With mitigation (see below), no noise-sensitive sites will be exposed to a significant increase in noise (1.5 DNL or greater) under any alternative in any test year. Table 2-2 in the FEIS summarizes the impacts of the airfield alternatives for the years 2000 and 2005.

While total operations are projected to increase no matter what the alternative, either of the new runway alternatives allows a decrease in nighttime activity because of the added capacity by accommodating more aircraft during daytime hours. The results indicate that the greatest negative noise impact is with current baseline conditions and that the No-Action alternative results in the greatest future negative noise impact.

#### Mitigation

MDAD developed existing noise abatement measures to reduce aircraft noise exposure on communities in the airport vicinity, without the implementation of a formal FAR Part 150, including non-aviation measures. These measures are outlined in the FEIS.

No additional mitigation measures were developed for the Commuter Runway alternative, since it could not accommodate any air carrier or large cargo or military aircraft operating in either direction.

However, new mitigation measures were designed for the preferred runway alternative. The FAA's determination in regard to the proposed air carrier runway assumes that the following mitigation measures shall be implemented at MIA:

1. The proposed air carrier runway would be assigned as the preferred runway for air carrier arriving aircraft. Most air carrier departures would continue to occur, as they do now, on existing Runway 9L-27R.
2. Nighttime activity would be minimized on the proposed air carrier runway, and most nighttime arriving and departing aircraft would be assigned to the existing Runway 9L-27R.
3. Departing aircraft on the proposed air carrier runway would be limited to existing flight corridors.

When these "mitigation plan" conditions were added to the source data for the noise model, the 65 and over DNL contours in both 2000 and 2005 for the air carrier alternative were reduced by approximately 3,000 people, compared to the non-mitigated air carrier alternative. Corresponding reductions in minority population and low income households were also demonstrated under the mitigated condition.

#### Additional Noise Analysis – National Parks

While FAA did not detect any impacts to Section 303(c) property, DOI raised questions during its agency review of the DEIS concerning overflights to Everglades National Park, Biscayne National Park, Big Cypress National Preserve, and Dry Tortugas National Park. In response to DOI, the FAA engaged in further review of this issue, and confirmed that the proposed new runway will not perceptibly affect air traffic or noise over the national parks (see Appendix N in the FEIS).

Specifically, the nearest national parks (Biscayne and Everglades National Parks) are located well beyond the DNL 65 dB noise contour boundary, and the noise contour for MIA is expected to shrink in the future. The parks are also well beyond the area where aircraft flight paths would be differentiated for the new runway. The runway would be in the same east-west direction as, and parallel to, existing runway 9R/27L, separated from it by only 800 feet. There would be no change in flight tracks or in general

proportion of aircraft on particular tracks into and out of MIA airspace over national parks. FAA's review indicates that there will be no taking or use of Section 303(c) property.

#### ADDITIONAL COMMENTS RECEIVED FROM U.S. EPA

The FAA received a letter dated November 2, 1998 from the USEPA regarding FAA's answers to its comments on the DEIS. The EPA did not agree with some of FAA's responses. The FAA reexamined the significant questions raised in that letter and provides the following additional explanation:

The EPA asked for consistent data presentation, particularly between the complete 1995 operations and fleet mix data in Tables 4-4, 4-5, and 4-6, and the percent information shown for the years 2000 and 2005 (EPA comment 1). The EPA requested that Tables 4-11 and 4-12, which depict the percentages of operations of aircraft for the air carrier and commuter runway alternative for 2000 and 2005 and the No Action alternative for 2000, be presented in the same format as Tables 4-4 and 4-5. Therefore, Tables 4-11 and 4-12, as well as 4-13, have been revised and are provided in Appendix A of this Record of Decision (ROD).

The EPA next took issue with the FAA's statement that the traveling public would not fly in great numbers at night, and the FAA's further assumption that under No Action, the traveling public will fly at night (EPA Comments #3 and #4). The FAA stated that it would be unreasonable to assume that the traveling public would fly in great numbers at night. Under the No Action alternative, some flights, but not "*great numbers*", are expected to shift to the early evening. This is because the significant daytime congestion on the airfield would prevent enough daytime arrival capacity to satisfy current and forecast demand.

EPA also stated that the FAA failed to adequately discuss the use of different aircraft to meet passenger demand. It would be unreasonable for the FAA to assume that airlines often replace current aircraft with larger aircraft rather than adding additional flights to meet demand. The air carriers, not FAA, determine the type and size of aircraft used at any particular time. These decisions by the carriers serving MIA are generally based on market conditions, competition, economics and facilities available at the airport. However, the use of larger aircraft was included in the fleet mix assumptions within the forecast used in the noise modeling. Section 1.3.3.4 of the FEIS discusses the aircraft fleet mix with respect to number of seats. However, Section 4.2.1.3.4 of the FEIS discusses the aircraft fleet mix in terms of aircraft type for the base year, 2000 and 2005.

EPA questioned MDAD's omission of mitigation in the form of residential purchases as part of its Capital Improvement Plan, and the lack of adequate mitigation provided in the EIS (EPA comments 5 and 6). The FAA agrees that moving noise away from the general population, or moving the general population away from noise, is desirable, but the FAA's authority in this area does not go beyond analyzing and disclosing the noise impact of MDAD's proposed project and reasonable alternatives.

It is clear that existing communities within the 65 DNL contour are currently being impacted by noise. However, the FAA does not agree that the EIS does not address this condition. Nor does the FAA agree that the EIS fails to include a mitigation plan appropriate to the proposed project. The opposite is true: this EIS shows that with use of the proposed air carrier runway targeted for arriving aircraft, the 65 DNL contours around MIA will actually shrink. The proposed air carrier runway itself mitigates the existing noise conditions around MIA. The proposed runway, by adding capacity and through its preferred use for arrivals, presents an option for reducing noise in the MIA vicinity. Through the EIS process, the FAA has determined that it should select the air carrier as the preferred alternative, because under the noise criterion, this project, with mitigation, will reduce the overall population inside the 65 DNL contour and satisfies the need for the project.

The EPA also stated that the FAA noise assessment process can fail to adequately predict future noise impacts, and that the FAA should provide detailed information on all FAA-approved actions that led to the population figures for the 2005 condition (EPA comments 5 and 6). Predictions are not infallible. Nevertheless, the FAA reiterates that the LDN system, which guides the FAA's noise assessment process, provides the best measure of noise exposure and identifies significant impact on the quality of

the human environment. The FAA's process has been reviewed favorably by and accepted in various other agency and judicial forums.

The FAA has already provided detailed information on the FAA-approved actions and FAA participation in developing the noise data in this EIS: Facts on the origin of MDAD's proposal; the scoping process; the selection of a forecast horizon, general data categories, and specific information to go into the categories; the definition of delay; the selection of alternatives; and the use of the INM noise model are all described in the EIS.

The EPA also notes that FAA-approved actions have occurred since 1995 at MIA (EPA comments 5 and 6), and that these should have been part of the current EIS process. The FAA reexamined these other actions, especially the Terminal Improvement Program and new Air Traffic Control Tower, and found that the need for those improvements was not dependent upon, related to, or connected to the need for a new runway. Furthermore, the potential environmental impacts of the proposed runway and those projects, which had been separately reviewed for impact, were not interrelated. Further discussion of this issue appears in the "Cumulative Impact" discussion in Section VII.I of this ROD.

The EPA concludes this set of comments by remarking that the "... FAA appears to have avoided the central issue of having a very large population being located in noncompatible land areas." The FAA responds by stating that a very large population is already located in MIA, an urban airport, in the 65 Ldn. This is the general population that continues to be affected by existing noise. The FAA's noise analysis was supposed to show, and did show, whether or not the proposed project or any of its alternatives would (i) bring more noise to that population, (ii) bring noise to a new population that was not exposed to it before, or (iii) raise the level of noise from the 65 to the 70 and over DNL for any of this population.

The results of the analysis, detailed here and in the FEIS, show that the No Action alternative would eventually reduce noise from the base line condition, but the Commuter and Air Carrier alternatives would reduce noise even more for the affected population. Since noise thresholds denoting "significant increase" are not crossed, even for the very small area of noncompatible land use added to the 65 DNL contour under the air carrier alternative, no additional mitigation measures are required in connection with the proposed project.

Finally, the EPA contends that projected capacity issues in the 2007 to 2010 time frame should have been included in the scope of this EIS (EPA comment 11). The FAA disagrees. At this time, as well as in 1995 when this study began, there was no reliable way to predict the MIA operations environment in 2010. The impacts for 2010 are not reasonably foreseeable at this time, because the number of open questions – among them, the potential for flat change in operation, since actual figures show that between 1995 and 1998, overall operations at MIA are down somewhat – preclude reliable forecasting.

Two other factors were used in deciding not to forecast as far out as 2010: First, MDAD as well as FAA study groups concluded that the delay problem at MIA required immediate attention. MDAD proposed the project to address existing problems. Typically, an environmental analysis is most accurate over the shortest possible time frame. Identifying and disclosing impacts through 2005 was reasonable in this context; it also promised the accuracy required to see if the proposed project or any of the alternatives would produce adverse impacts in relation to the immediate need to address delay. Whether or not growth after 2005 turns out to be comparatively small or comparatively large, the delay statistics were already compelling in 1995.

Second, there is no other major development proposed in the 20-year AMP prepared by MDAD in 1994. The air carrier runway was the only significant airfield improvement included in the AMP; there are no future major airfield improvements planned through 2014, the end of the 20-year planning cycle.

The FAA's decision to keep the forecast horizon at 2005 is further supported by the noise assessment results. These show that the No Action alternative, at any time and under any of the currently foreseeable forecast conditions and no matter what occurs in 2010, will leave the surrounding residents exposed to more noise. The Air Carrier alternative, on the other hand, at any time and under any of the

currently foreseeable forecast conditions, will leave the surrounding residents exposed to less noise than No Action, no matter what unexpected turn operations may take in 2010.

#### Additional Noise Analysis – Noise-Sensitive Sites

Two additional measures of aircraft noise were taken to aid in evaluating impacts. These evaluations were based on a “Time Above” (TA 85) analysis, which measures the cumulative number of minutes per average 24 hour day that aircraft operating into and out of MIA exceed the 85 dBA level. First, this analysis was used to measure noise at noise sensitive sites (e.g., churches, hospitals). Next, it was used for schools inside the 65 DNL contour. This analysis did not identify a significant increase in noise for any noise sensitive area or school in the MIA vicinity.

As presented in Table 4-21 of the FEIS, the TA 85 values for the year 2005 for all alternatives fall below the 1995 baseline at all noise sensitive sites, despite the forecast increase in aircraft operations, with the exception of one site located immediately east of the existing Runway 9L. For the No Action alternative, which drops to 6.9 minutes, this is due to the mandatory phaseout of Stage 2 aircraft. With both the Commuter and Air Carrier alternatives, the TA values fall to 7.2 and 7.1 minutes, respectively.

As presented in Table 4-22, the TA 85 values during school hours also fall below the 1995 baseline under all alternatives.

Thus, no significant noise increase was identified.

#### Noise Determination for Preferred Alternative

The FAA has concluded that there will be no significant noise impacts arising from the proposed new air carrier runway.

#### B. Social.

MIA is bordered by several established residential communities and commercial areas. Neither runway alternative would divide or disrupt these areas. Because no land acquisition or residential relocation is required, there is also no impact on existing community develop plans. The number of minority and low-income households in the area, which is significant, will neither increase nor decrease under either runway alternative. No other environmental justice impacts were identified. Short-term construction jobs may be connected with runway construction, but no other effect on employment is expected.

The Air Carrier Runway alternative would require displacement of Building # 20. Other buildings within the footprint of the runway have been vacated prior to completion of the FEIS and are currently scheduled to be demolished.

With respect to Building #20, MDAD has represented to the agency that this building has 7 tenants and is located to the east of the new runway. The existing leases are month to month and 5 of the 7 tenants will not be relocated to another location on the airport. These 5 tenants will cease operations at the airport because they have not been meeting their contractual obligations with the County. The County will be relocating 2 of the 7 tenants to other locations on the airport. Also, Building #20 is scheduled to be torn down with or without the new runway because the building is condemned by the building department. It needs significant repairs and the County determined that repairing the building is not feasible.

There would be some small increase in vehicular traffic on the various roadway segments in the area, as a result of MIA's forecast growth. While some road work may be connected to MIA's terminal improvement program, the proposed airfield development would not require alteration of any existing surface transportation patterns or access points on the existing roadway system.

#### C. Air Quality.

The air quality analysis was particularly important in this EIS because the need for a proposed runway is associated with unacceptable aircraft delays, and aircraft delayed on the airfield emit pollutants. Also, the proposed project is located within an area designated "maintenance" for the air pollutant Ozone (O<sub>3</sub>).

The analysis showed that with the increased capacity represented by either runway alternative, air pollutant and air pollutant precursor total emissions are expected to decrease at MIA, because ground-based aircraft delay will decrease. This result is not possible under the No Action alternative, under which aircraft ground delays increase.

Specifically, when compared to the No Action alternative, the Commuter Runway alternative shows lower emissions of Carbon Monoxide (CO), Volatile Organic Contaminant (VOC), Nitrogen Dioxide (NO<sub>2</sub>), Sulfur Dioxide (SO<sub>2</sub>), and PM, decreasing by 7.5, 4.5, 0.5, 0.1, and 0.1 tons/day, respectively. When compared to the No Action alternative, the air carrier alternative shows lower emissions of CO, VOC, NO<sub>2</sub>, SO<sub>2</sub>, and PM, decreasing by 7.3, 4.4, 0.5, 0.1, and 0.1 tons/day, respectively. The FAA also performed an evaluation of runway-related VOC and NO<sub>2</sub> emissions increase for de minimis levels; as indicated above, the results indicate emissions would actually be lower with the addition of either the Commuter or Air Carrier Runway than they would be with No Action.

The preferred air carrier runway alternative has "de minimis" air quality impact, and therefore conforms with Florida's State Implementation Plan (SIP). Receipt of an air quality certification to this effect from the Governor's office is expected.

#### D. Water Quality.

Surface water, stormwater drainage, aquifers, and permitting requirements were all identified, for all alternatives.

The existing surface water flow patterns at MIA would not be modified by the runway alternatives. Existing outfalls would be utilized and post-development flows would be attenuated, so as not to exceed the existing flows. Since the management of surface water would be engineered to prevent erosion by peak flows, construction of either runway alternative is expected to improve water quality.

The proposed *Master Stormwater Drainage Plan for MIA* includes the use of source control and structural control Best Management Practices to ensure appropriate stormwater practices. These include: material management practices; sweeping and scrubbing; spill prevention and response; preventative maintenance; employee training; and, water quality monitoring; oil/water separators; grit chambers; and pollution control inlets. These items are already in place at MIA and are not negatively affected by either runway alternative. Since most of the existing stormwater drainage system does not provide water quality treatment and construction of a system to accommodate a new runway would provide water quality treatment, water quality would improve with a new runway.

As to underlying aquifers or deeper production zones within the Biscayne aquifer, the runway development alternatives would have no effect, nor would they affect either the location or movement of a saltwater isochlor that has been identified by MDAD one mile to the east of MIA.

MIA's existing spill prevention and treatment programs are expected to prevent hazardous levels of pollutants from entering the infiltration systems during runway construction. (The *Consent Order and Settlement Agreement* that is in effect between FDEP and Miami-Dade County governs these issues.)

All surface and groundwater quality initiatives are detailed in the *Pollution Control Master Plan* (MDAD, December 1993), in the report requesting a Management and Storage of Surface Water Permit Modification for the MIA Terminal Area (March 11, 1994), and in the addendum to the request for modification report (March 31, 1994).

The FAA assumes that for either runway alternative, MDAD would obtain all necessary permits. MDAD already holds a final National Pollutant Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (EPA). A water use permit would be required from the South Florida

Water Management District (SFWMD) for any de-watering activities associated with the construction alternatives. An Environmental Resource Permit (ERP) from the SWFMD would be required for any proposed modifications to the existing on-site canal system. Any ERP issued for this area is expected to include special conditions for manatee protection and turbidity control. A letter dated November 23, 1998, from the Florida Department of Community Affairs, the State Clearinghouse Agency, provided reasonable assurance that water quality standards will be met.

#### E. Solid Waste.

The solid waste generation rate at MIA does not change with or without the project. The aircraft are still arriving and passengers are still traveling, regardless of the number of runways. There would be no long-term increase in the collection of solid waste as a result of operation of the new Commuter or Air Carrier alternatives. The runway alternatives would result in temporary generation of construction and demolition type solid waste that would be disposed of at available county and approved private landfill facilities. There is sufficient capacity available at these facilities to accommodate this construction debris.

#### F. Hazardous Materials.

No significant impact in this area was found for any of the alternatives.

The FAA did not conduct a new hazardous materials investigation during the EIS process but instead relied on extensive information available from MDAD. This decision was made because the assessment and remediation of all soil and groundwater contamination at MIA is addressed in a *Consent Order and Settlement Agreement* that was executed between the FDEP and MDAD in 1998. *The Consent Order and Settlement Agreement* is incorporated into the ROD by reference (it is available for review at Miami-Dade Aviation Department, Environmental Engineering, 4200 N.W. 36<sup>th</sup> Street, Suite 100, and at the FDEP Southeast District Office, West Palm Beach).

The USTs, fuel hydrant systems, and oil/water separators at MIA are currently in compliance with applicable spill prevention, secondary containment, leak detection, and cathodic protection requirements. However, prior soil and groundwater contamination from fuel and chemical spills has been identified at MIA; some contaminated sites are located inside the proposed new runway construction area. These areas are not necessarily in compliance with applicable regulations. The *Consent Order* already governs the ongoing approved treatment process for these contaminated areas.

Under any alternative, remediation for these identified contaminated sites in and around the vicinity of the proposed runway construction area would continue as noted in the *Consent Order* and is the responsibility of MDAD (see FEIS, Section 3.3.3.8.2). Because of the hazardous materials handling procedures and remediation deadlines required through the *Consent Order*, as well as the location of the contaminated sites themselves, construction of either runway alternative is not expected to disperse hazardous materials and is not expected to interfere with MDAD's remediation activities.

According to MDAD, remediation (removal of contaminated soils and installation of pump and treat systems) of any identified hazardous waste discharges in the vicinity of the proposed new runway area would either be completed before the individual components of the airfield development program were initiated or incorporated in the construction plans. If significant contamination were encountered during construction of the runway, remediation would be performed during or after the construction phase and, if necessary, the location of exfiltration trenches adjacent to the improvements would be modified to allow construction to continue.

The FAA's finding that no alternative produces a significant impact assumes the above MDAD activities. It also assumes that for either runway alternative, soils or other materials contaminated with hazardous waste encountered during construction, would be excavated, stockpiled, tested, then hauled by a licensed hauler to an approved hazardous waste disposal facility. Any and all hazardous materials, hazardous waste, or environmental contamination uncovered during runway construction would be assessed and, if necessary, cleaned up in accordance with federal, state, and *Consent Order* requirements.

While no impact has been predicted for groundwater monitoring wells, any such wells that might be impacted by new runway construction would be protected and, if necessary, replaced or abandoned in place, in accordance with local, state, and federal regulations. Existing contaminated groundwater and contaminated soil recovery and treatment systems would also be protected or replaced, according to the *Consent Agreement*. If necessary, future monitoring, recovery, and treatment systems could be designed and constructed in association with new runway construction to remove conflicts between site cleanup and construction.

Various earthwork, drilling, and construction measures could also be utilized to help prevent the spread of contamination during the airport construction process. Soils containing excessive concentrations of hydrocarbons encountered during the construction process would be excavated and stockpiled. Stockpiled soils would be tested and, if acceptable, would be hauled by a licensed contractor to an approved disposal facility. The FAA's findings in this EIS assume that MDAD and the FAA would work together to assure a satisfactory outcome, if such unforeseen circumstances occurred.

As to hazardous materials used in conjunction with routine airport operations, they would continue to be stored, used, and disposed of at current levels in accordance with federal, state and local regulations, no matter what the alternative. In addition to ongoing remediation activities at MIA, MDAD has also prepared other plans and programs that regulate and control the storage, use, and handling of hazardous materials and waste stream, in routine and, if necessary, construction operations.

Relevant reports include: Best Management Practices—Dade County Aviation Department, October 1996; Hazard Communication and Emergency Action Plan—Miami-Dade County Aviation Department, May 1997; Stormwater Pollution Prevention Plan for Construction Activities, March 1994; MIA Final Draft - Spill Prevention Control and Counter Measures Plan for MIA, June 1997; and the Dade County Aviation Department's Technical Specification (P-160) which addresses the excavation and disposal of contaminated soils and groundwater contamination from spills during construction. Copies of these documents are on file at the MDAD Environmental Department.

#### G. Other Impact Categories.

No significant impacts were identified in the FEIS for the following categories:

- Compatible land use – No change in surrounding land use or area zoning is anticipated as a result of the proposed development.
- Induced socioeconomic resources – Regional population and public services would continue to grow at the same rate for all alternatives. Continued airport development could induce additional earnings, direct expenditures, air traveler expenditures, and other revenues associated with airport development for local businesses and governments.
- Environmental justice issues – The area surrounding MIA contains a significant minority population, and in the 65 and greater DNL, the minority population is about 90 percent. There is also a significant low-income population around MIA; in the 65 and greater DNL, about 46 percent of households are low income. None of the alternatives caused negative impacts, since the 65 and greater DNL grows uniformly in the area under the No Action alternative, and shrinks under either of the new runway alternatives. There are no disproportionate adverse impacts, therefore, to minority or low-income populations in the area.
- Department of Transportation Act, Section 303(c) property – The FAA applied its FAR Part 150 "Land Use Compatibility Criteria" document to the Section 303(c) properties identified during the study. The sites were: (i) Melrose Park, which is currently inside the 75 DNL contour and which, under either new runway alternative, would fall below the 75 DNL noise level; (ii) East Drive Park, which under the Air Carrier alternative would experience a 1.0 DNL increase in the year 2000 and a 0.2 DNL increase in 2005 over the No Action situation; and (iii) Virginia Gardens Town Hall Park, which under the Air Carrier alternative would experience a 1.2 DNL increase in

the year 2000 and a 0.2 DNL increase in 2005, compared to the No Action situation. These changes in noise levels are considered imperceptible. No significant impact was identified. Construction of either new runway will not require taking or use of 303(c) property.

- Land and Water Conservation Act, Section 6(f) property – No DOT LWCA Section 6(f) sites were identified within the 1995 65 DNL noise contour. Nor are Section 6(f) sites included in the year 2000 or 2005 contours, under either of the new runway alternatives. Construction of either new runway will not require taking 6(f) property. All construction would occur within existing airport property, so there is no taking or use of DOT LWCA Section 6(f) property.
- Biotic communities – All property inside the MIA boundaries has long been altered or disturbed. No native plant communities are found within the boundaries. Wildlife use of the airport is limited to urban-adapted species that tolerate high levels of human activity. Airport drainage canals may be used by invertebrates, small fish, frogs, turtles, and other amphibians/reptiles, as well as by birds that are adapted to the airport operations. No impacts to biotic communities were identified for any of the alternatives.
- Endangered or threatened species – Based on existing information and a survey, no state or federally listed plant or animal species has been documented on the project site. Nor is there designated critical habitat in the project area. This has been confirmed by a letter from the U.S. Fish and Wildlife Service. The burrowing owl, listed by the Florida game and Freshwater Commission as a species of special concern, is known to inhabit burrows at MIA. Two burrows that appeared inactive in 1995 would be taken by Commuter Runway construction; one active burrow near the west end of Taxiway L and two inactive burrows might be affected by Air Carrier Runway construction. This impact is not significant, because for either new runway, surveys would be conducted prior to construction, and Federal and state permits (which permit relocation for this species) to proceed would be obtained.
- Historic, architectural, archaeological and cultural resources – The State Historic Preservation Officer (SHPO) has determined that there are no significant archaeological sites recorded or likely to be present within the MIA project site. There is one structure located on MIA, 8DA5584 (“Building 48”) that is eligible for the National Register of Historic Places (NRHP); the FAA agrees with the SHPO finding. However, a previous determination as well as additional analysis undertaken during the EIS process indicates that a new air carrier runway would not alter the setting or any of the characteristics of the structure that make it NRHP-eligible. The SHPO has concurred with this revised assessment. No other impacts in this category were found.
- Wetlands – No natural wetlands exist on the MIA site. A 1997 assessment indicated the airport property is not a wetland, and that a wetland permit is not required.
- Floodplains – The proposed development will not be located within the 100-year floodplain. The only portion of the airport within the 100-year floodplain, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) is in the southwest corner of the airport. The proposed project will be designed to avoid increasing the peak discharge rate or the total volume discharged. The development would not reduce floodplain storage. Neither new runway site is located in a floodplain, and the site does not indirectly support secondary development or otherwise significantly impact a base floodplain.
- Coastal zones and coastal barriers – The closest coastal barrier islands are approximately 10 miles east of MIA; the proposed new runway would not impact the coastal zone. The Florida Coastal Zone Management Program Office has reviewed the new runway proposal and found no impact.
- Wild and scenic rivers – There are no wild and scenic rivers located at MIA .
- Farmland – All of the land located within the MIA property boundary is classified as urban land, and there are no prime or unique farmland soils within that classification.
- Energy supply and natural resources – The supply of materials necessary for the proposed construction is readily available, and no natural resources that would be needed are in short

supply. A minor increase in power requirements would result from the proposed airport lighting; this power is readily available in the local market. The No Action alternative would eventually result in higher aircraft fuel consumption, because of the projected increase in delays at MIA discussed earlier. The new runway alternatives could favorably affect energy supply, with a fuel savings of about 71,000 gallons per day for the Air Carrier and about 46,000 gallons per day for the Commuter runway alternatives.

- Light emissions – The proposed new airport lighting systems would be low to the ground on airport property, placed in accordance with FAA regulations, and would not create impacts to the surrounding communities.
- Other impact categories – No other unique or unusual environmental impacts were identified during the EIS process.

#### H. Construction – Short Term Effects.

For construction of either of the runway alternatives, construction impacts would be short-term, minimized through temporary environmental controls. Control measures recommended by Item P-156 of FAA Advisory Circular 150/5370-10 *Standards for Specifying Construction of Airports* would be incorporated into the project specifications for both development alternatives. All debris would be disposed of at a licensed Miami-Dade County landfill. Other plans and programs prepared to regulate and control construction activities include: *Best Management Practices – Dade County Aviation Department*, October 1996; *Hazard Communication and Emergency Action Plan – Miami-Dade Aviation Department*, May 1997; *Stormwater Pollution Prevention Plan for Construction Activities*, March 1994; *Final Draft – Spill Prevention Control and Countermeasures Plan for MIA*, June 1997; and the *Dade County Aviation Department's Technical Specification (P-160)* which addresses the excavation and disposal of contaminated soils and groundwater contamination from spills during construction.

For construction noise that might affect local neighborhoods, MDAD has committed to erect a new Noise Abatement Barrier along NW 36<sup>th</sup> Street, just north of the proposed new runway and existing cargo buildings, hangars and other structures along the north boundary of the Airport, to provide physical obstructions to penetration of this noise into populated areas at the airport perimeter.

#### I. Cumulative Impacts.

The FAA has considered the overall cumulative impacts of the proposed action, concurrent actions, and the consequences of subsequent related actions as described in the FEIS, and determined that the cumulative impacts appear to be “not significant”. MDAD has initiated some significant changes at MIA within the last few years; construction of passenger terminal modifications and a new air traffic control tower has already begun.

Where one airport undertakes multiple development projects, the “flip side” of cumulative impact analysis is segmentation analysis. The FAA therefore reviewed overall development at MIA to see if the projects raised segmentation problems that might affect the current EIS process. The FAA concluded that MIA improvement projects have not been segmented to avoid thorough consideration of environmental impacts. As discussed below, both the MIA Terminal Improvement Program and the Air Traffic Control Tower were submitted to environmental impact review. In addition, the purposes and time frames for these projects were sufficiently distinct. The Terminal Improvement Program primarily concerns passenger processing and aircraft gate configuration, and MDAD represented to the FAA that this program would proceed, as indeed it has, with or without the proposed new runway project. The Air Traffic Control Tower became necessary because improvements to the Terminal created line-of-sight problems for air traffic controllers managing the airfield and was, again, not related to the proposed new runway. Finally, the environmental impacts for both of these projects were determined to be “not significant.”

The FAA then took a careful look at the above projects to see if these changes, along with MDAD's proposed project, produced significant impacts when taken together. The projects included in the

“cumulative impact” analysis were, again, the MIA Terminal Improvement Program and new Air Traffic Control Tower (ATCT) MIA, and additional projects described in the *Capital Improvement Program—Dade County Aviation Department* (January 1997). These projects include the following:

- Modification of passenger terminal concourses, including reconfiguration and addition of aircraft parking gates
- Construction of new air traffic control tower
- Relocation of MIA fuel farm
- Stormwater management project on west end of airport
- Pollution abatement program
- Hazardous materials remediation program
- Minor highway intersection modification on east end of airport
- Miami Intermodal Center (MIC) multi-modal ground transportation project will include enhanced access to Miami International Airport

Separate environmental studies were conducted for various of the above projects. A written “Categorical Exclusion” (CATEX) was issued for the Terminal Improvement Program, after the FAA reviewed material submitted by the MDAD and others. An Environmental Impact Statement (EIS) was issued for the MIC project by the Federal Highway Administration, with FAA as one of several participating agencies. A Finding of No Significant Impact (FONSI) was issued for the proposed new ATCT. No significant impacts were discerned on any of these projects.

Looking at these projects together, cumulative impacts appear to be “not significant” because:

- (1) All projects in the *Capital Improvement Program* will be within airport boundaries.
- (2) The passenger terminal modification will add a small number of gates; these are not expected to attract more air traffic to the area. The passenger terminal modification will also streamline domestic and international passenger processing at MIA, which does not affect (and is not affected by) a potential new northside runway.
- (3) Between the terminal modification and the MIC, the parking lot space (area or number of spaces) will not change and with the MIC will not degrade air quality.
- (4) These projects, taken together, will reduce airfield and landside delays (which improves air quality) but will not add capacity beyond what is needed for short-term delay problems.
- (5) The hazardous materials management and remediation projects are already underway and will continue as planned, governed by a *Consent Agreement* between FDEP and MDAD, whether or not MDAD proceeds with construction of a new runway.

The FAA did not find in this data any indication of any interaction between the measures in environmental impact categories. Each measure has independent utility at MIA. The most important potential impact to the community, noise, is not affected by either the passenger terminal modification or the ATCT, and, in turn, the noise analysis for the new runway does not change, with or without the terminal modification or the ATCT.

The proposed new runway does not, when considered with other projects currently underway at MIA, create significant cumulative impacts.

## VIII. AGENCY FINDINGS

- A. The proposed project is reasonably consistent with existing plans of public agencies for development of the area surrounding the airport [49 U.S.C. App. 2208(b)(1)(A)].

The proposal was coordinated with other federal agencies, state agencies through the Florida State Clearinghouse, and local municipal jurisdictions, agencies and community organizations. Federal and state agency comments on the DEIS were solicited and received; the FAA's responses to the comments are included in Appendix N. Local jurisdiction, agency and community organization comments were also solicited and received, and the FAA's responses appear in Appendix O. All comments on the DEIS were considered in preparing the FEIS. None of the comments indicated problems with existing plans of public agencies. The FAA finds that the proposed air carrier runway does not conflict with the existing plans of any public agencies for development of the area surrounding the airport.

- B. Fair consideration has been given to the interests of communities in or near the project location [49 U.S.C. App. 2208(b)(4)].

Nearby communities have had the opportunity to express their views during the following meetings and workshops:

Scoping Meetings: 5/8/95 – Agency and MDAD only; 5/8/95 – Public invited  
Public Workshops: 1/18/96 and 10/15/97  
Public Hearing: 2/4/98 (FAA accepted written comments until 2/20/98)  
Notice of Intent to Prepare DEIS: 3/13/95  
DEIS Availability Notice: 12/24/97

Comments were received at all stages of the EIS process. All comments received during development of the environmental documents were thoroughly considered and, in some cases, used in the analysis and discussion of specific impact areas. A summary of the comments received on the DEIS and FAA's analysis of the comments can be found in Sections S.5 and 5.0 of the FEIS. Copies of the written comments and FAA's responses are included in Appendices N, O, and P of the FEIS.

After the scoping meetings, MDAD set up a noise abatement task force. Site specific noise monitoring was done at Miami Springs and Virginia Gardens sites and the data were analyzed and discussed in the FEIS. The air carrier runway, in particular, was configured to include specific noise abatement; the noise analysis was performed assuming this mitigation. ROD Section VII, Major Environmental Impacts and Mitigation Measures, describes the operational mitigation measures the FAA assumes as part of its approval.

- C. Appropriate action has been or will be taken to restrict to the extent reasonable, the use of land in the vicinity of the airport to purposes compatible with airport operations [49 U.S.C. 2210(a)(5)].

In every grant application, MDAD must furnish a statement on compatible land use, and each grant issued to MDAD contains an assurance on compatible land use. Land use assurances are included in Appendix J of the FEIS. For the proposed project, no land acquisition is required.

Development restrictions around MIA are not realistic, since there are very few areas surrounding the airport site that are currently undeveloped. In addition, MDAD has represented to the FAA that it does not have the authority to control all land use in the vicinity of the airport and must rely on surrounding communities to control noncompatible development. In that regard, MDAD implemented a noise mitigation program in 1996 that involves noise monitoring and encourages land use controls by the surrounding cooperating communities to control future noncompatible development.

- D. The Governor of the State of Florida's representative has certified in writing that there is reasonable assurance that the proposed project will comply with applicable air and water quality standards [49 U.S.C. App. 2208(b)(7)(A)].

Ralph Cantral's letter to Bart Vernace dated November 23, 1998, indicated that reasonable assurance has been provided that both surface water and groundwater quality standards will be met through remediation efforts, existing Consent Orders and Settlement Agreements, and future stormwater permit requirements. The letter indicated that the proposed project will also improve air quality in the vicinity of the airport as a result of reduced numbers of aircraft being kept in holding patterns while awaiting clearance to land.

- E. There is no use or taking of lands subject to DOT Section 303(c) or Land and Water Conservation Act 6(f) [49 U.S.C. Subtitle I, section 303 and 16 U.S.C. 4691-4 et seq.].

No land acquisition is required for the proposed project. As to Section 303(c) properties in the study area, the noise analysis identified some parks located within the existing 65 DNL noise contour, but none that fell within the definition of "use" or "taking." In addition, with the proposed project, noise levels at the included parks will decrease, compared to the No Action alternative. Specifically, twelve parks would have a decrease in noise in 2000 and 2005. While East Drive Park is projected to have an increase of 1.0 DNL in the year 2000 and 0.2 increase in 2005, and Virginia Gardens Town Hall Park would have an increase of 1.2 DNL in 2000 and 0.2 in 2005, these increases are not significant by definition: an increase in noise exposure of less than 1.5 DNL is not deemed "significant", because at or below that level, the difference in sound is not detectable to the human ear.

There are no DOT LWCA Section 6(f) sites in the ROD.

- F. No off-airport people or businesses will be displaced or relocated as a result of the project [Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended].

The proposed airfield development would be constructed within the MIA property boundary and would not result in the relocation of any surrounding businesses or residences. Therefore, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 is not applicable to this project.

- G. There are no jurisdictional wetlands affected by the project [Executive Order 11990, as amended].

The Miami-Dade County Environmental Resources Management Division (DERM) indicated no natural wetlands exist on the MIA site. The U.S. Army Corps of Engineers (USACOE) has indicated that the proposed development does not appear to impact any Waters of the United States subject to Section 404 of the Clean Water Act. Since there was no use of wetlands, no mitigation was necessary.

- H. There is no encroachment on the floodplain state and/or floodplain protection standards by the project [Executive Order 11988].

The proposed development is not located in a floodplain and does not indirectly support secondary development within a base floodplain nor otherwise significantly impact a base floodplain. Since there is no encroachment, no mitigation was necessary.

- I. Construction of the proposed project is compatible with at the ongoing hazardous materials cleanup at MIA governed by the *Consent Order and Settlement Agreement*.

Various hazardous materials sites on MIA are subject to remediation action, governed by a *Consent Order and Settlement Agreement* between FDEP and MDAD. There is an ongoing approved treatment process for prior soil and groundwater contamination from fuel and chemical spills at known sites (see FEIS, Table 3-14) at MIA. Some of these sites are located in the proposed project area.

MDAD has represented that those sites scheduled for remediation under the *Consent Order* will, for the most part, be cleaned up prior to the start of new runway construction. In addition, MDAD is obligated under the *Consent Order* to continue to identify, evaluate, and if necessary, clean up hazardous material in accordance with applicable federal, state and local laws. If contaminated soils or other substances are encountered during construction, the FAA understands that they would be stockpiled, tested and hauled by a licensed contractor to an approved disposal facility (FEIS, Section 4.22.3), in accord with *Consent Order* and any other applicable FAA and federal standards.

- J. The addition of a northside parallel air carrier runway to MIA's existing airfield configuration will add sufficient capacity to reduce current and short-term future aircraft delay.

MIA is currently at or near maximum capacity during peak periods. The current increase in airport traffic stretches the ability of the existing airfield runway and taxiway system to efficiently accommodate the present demand. This condition is further complicated by the high level of urbanization surrounding the Airport and the resultant physical constraints of expanding the MIA to adjacent offsite areas.

The purpose of the proposed runway at MIA is to add enough capacity to manage the short-term forecast activity level and to decrease delay. Without more runway space, it appears that MIA will be unable to efficiently accommodate the forecast demand, and greater delays will be experienced. Because MIA is an important component of the national system of airports, delays could have a system-wide impact.

The proposed project will provide relief by adding capacity sufficient to reduce current delay and bring short-term forecast delay to within acceptable levels. Delay and taxi time comparisons are shown in the FEIS, Table 1-8.

## **IX. DECISION AND ORDER**

The FAA decision is based on a comparative examination of environmental impacts for each of the three alternatives studied during the EIS process. For most categories, there were no impacts at all. In those areas where there were impacts, the No Action alternative would produce a negative impact, particularly as to noise, compared to either runway alternative. In addition, No Action fails to address the identified need at MIA to add capacity for delay reduction purposes.

Comparing the two runway alternatives where there were environmental impacts, again, neither alternative created an adverse impact in any impact category. However, the Commuter shows slightly lower noise impacts than the Air Carrier alternative. On the other hand, the capacity it adds does not satisfy short-term future demand forecasts, and therefore does not resolve delay problems. The Air Carrier alternative does resolve immediate and short-term capacity and delay problems, without creating significant noise impact, and, in addition, allows for some improvement in air quality.

The FEIS has disclosed the potential environmental impacts for all the alternatives, and it provides a fair and reasonable assessment of the potential environmental effects. For these reasons, described in more detail earlier in this ROD and supported by detailed analysis in the FEIS, the FAA has determined that the preferred Air Carrier alternative is acceptable under environmental standards and advantageous in meeting the needs for the project.

Having made this determination, the FAA considered whether to approve other agency actions necessary for project implementation. FAA approval signifies that Federal requirements relating to airport development planning have been met, and that MDAD may proceed with design and specifications for proposed development, as well as compete for Federal funds for eligible items. Based on its independent review, the FAA concludes that the preferred alternative, i.e., the air carrier runway proposed by MDAD, is appropriate and practical in light of MDAD's objectives.

The FAA finds that its approval of the items that will allow the project to proceed is consistent with its statutory mission and policies and is supported by the findings and conclusions reflected in the FEIS and related documents. The FAA therefore approves proceeding with the agency actions required for project implementation, pursuant to MDAD application.

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

Having fully and carefully considered the FAA's goals and objectives as to aeronautical aspects of the proposed runway development and related activities at MIA, as well as the national transportation policies within which the FAA exercises its authority, and based on the administrative record of the proposed project, in accordance with 14 CFR Part 169 and 49 U.S.C. Section 44502(b), I certify that the air navigation facilities that would result are necessary for use in air commerce and national defense purposes.

**ACCORDINGLY**, pursuant to the authority delegated to me by the Administrator, I find that the actions summarized in this Record of Decision are reasonably supported, and for those actions I hereby, therefore, approve that they may be taken, together with the necessary, related and collateral actions to carry out the agency's duties and responsibilities involved and described in this Record of Decision, as follows:

- A. Approval under 49 U.S.C. Section 47107(a)(16) of a revised Airport Layout Plan (ALP) reflecting the proposed airfield modifications, specifically, the proposed new runway, and parallel and connecting taxiways, together with required environmental approvals for these improvements under 49 U.S.C. Sections 4321-4347 and 40 U.S.C. Parts 1500-1508. Specifically:
  1. Approval for construction of a new parallel east-west runway (8,600 feet x 150 feet).
  2. Construction of a new parallel and connecting taxiways (75 feet wide);
  3. Installation of associated runway and taxiway lighting and signs;
  4. Installation of certain navigation aids; and
  5. Environmental mitigation measures.
- B. Approval to make the necessary determinations and take actions under 49 U.S.C. Sections 40103(b) and 44701 regarding the establishment of flight procedures, and other rules or terms and conditions for the safe and efficient use and management of the navigable airspace.
- C. Approval to make the necessary determinations and take actions, through the aeronautical study process, prescribed for evaluating obstructions to the navigable airspace under the standards and criteria of 14 CFR Part 77.
- D. Approvals to make the necessary determinations and take actions, to evaluate the appropriateness of proposals for airport development from an airport utilization and safety perspective based on aeronautical studies conducted pursuant to the processes under the standards and criteria of 14 CFR Part 157.
- E. Approvals to make the necessary decisions and take actions under 49 U.S.C. Sections 40103(b), 40113, and 40120 to develop air traffic control and airspace management procedures to establish and maintain safe and efficient handling and movement of air traffic into and out of the airport.
- F. Approval of the environmental prerequisites only needed to proceed with required determinations under 49 U.S.C. Sections 47106 and 47107 pertaining to FAA grant-in-aid funding for airport development, to be further considered upon receipt of a timely application from MDAD for Federal funds for eligible items described in the FEIS.

This ROD presents the Federal Aviation Administration'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. Section 46110.

Issued in College Park, Georgia.

---

Carolyn Blum  
Regional Administrator  
Southern Region, Federal Aviation Administration  
U. S. Department of Transportation

---

Date

## ATTACHMENT

### LIST OF REPORTS FOR THE RECORD

*Background Environmental Data for the Proposed Development of New Runway Facilities, Miami International Airport* (April 1994)

*Miami International Airport Master Plan Update* (June 1994)

*Dade County Aviation System Plan (Draft)* (January 1996)

*Capital Improvement Program – Dade County Aviation Department* (January 1997)

*MIA Strategic Airport Terminal Planning Study* (January 1997)

*Environmental Assessment for Proposed Air Traffic Control Tower (ATCT) for MIA and Finding of No Significant Impact (FONSI)* (March 1997)

*Environmental Analysis for Proposed Terminal Improvement Program at MIA* (March 1997) and *Categorical Exclusion (CATEX)* (May 1997)

*1997 FAA APO Terminal Area Forecasts (TAF) for Miami International Airport*

*Pollution Control Master Plan* (December 1993)

*MIA Master Stormwater Drainage Plan* (December 1992)

*Stormwater Pollution Prevention Plan for Construction Activities* (March 1994)

*Spill Prevention Control and Countermeasures Plan for MIA* (June 1997)

*Hazard Communication and Emergency Action Plan – Miami-Dade Aviation Department* (May 1997)

*Best Management Practices – Dade County Aviation Department* (October 1996)

*Development of Regional Impact/Application for Development Approval for Miami International Airport* (anticipated completion 1999)

*Consent Order and Settlement Agreement* (which has been executed between the FDEP and MDAD)

## **Appendix A**

This section includes copies of new Tables 4-11A, 4-11B, 4-12 and 4-13 that were developed to revise Tables 4-11, 4-12 and 4-13 in the Final Environmental Impact Statement (FEIS) dated SEPTEMBER 1998. These revised tables are included as a supplement to the FEIS.

TABLE 4-11A  
 2000 Day-Night Percentages with the Proposed Air Carrier or Commuter Runway  
 Environmental Impact Statement for Proposed New Runway at MIA

Aircraft Category	Aircraft Type	Average Daily Operations	Arrivals Day	Arrivals Night	Departures Day	Departures Night
Commercial	B747	60.08	25.53	4.51	25.23	4.81
	A300	58.48	24.27	4.97	23.39	5.85
	B767-CF6	37.60	15.60	3.20	15.04	3.76
	B767-300	12.52	5.20	1.06	5.01	1.25
	DC10-30	30.62	12.71	2.60	12.25	3.06
	DC8-70	141.16	43.76	26.82	55.76	14.82
	B757-RR	106.49	42.60	10.65	51.12	2.13
	MD83	59.53	25.60	4.17	27.98	1.79
	B727-EM1*	252.98	108.78	17.71	118.90	7.59
	B727-EM2*	183.54	78.92	12.85	86.26	5.51
	B737-300	73.34	33.37	3.30	33.00	3.67
	F100	28.52	12.98	1.28	12.83	1.43
	SF340	114.87	56.29	1.15	51.69	5.74
	DHC8	61.85	30.31	0.62	27.83	3.09
	CNA441	212.47	103.05	3.19	98.80	7.44
DHC6	76.64	36.20	1.12	34.71	2.61	
Military	C130	7.67	3.53	0.31	3.53	0.31
	707-320	5.77	2.65	0.23	2.65	0.23
	KC135R	2.86	1.32	0.11	1.32	0.11
	KC135B	2.86	1.32	0.11	1.32	0.11
GA Jet	Lear 35	49.51	20.79	3.96	20.79	3.96
	Lear 25	22.36	9.39	1.79	9.39	1.79
	CIT3	7.98	3.35	0.64	3.35	0.64
GA Prop	GASEPF	33.62	14.46	2.35	14.46	2.35
	BEC58P	67.24	28.91	4.71	28.91	4.71
	CNA441	29.42	12.65	2.06	12.65	2.06
<b>Total</b>		<b>1737.99</b>	<b>753.53</b>	<b>115.46</b>	<b>778.18</b>	<b>90.81</b>

\* These aircraft will be retrofitted to Stage 3 conformance standards required by federal legislation.

Source: TSI, 1998.

TABLE 4-11B  
 2005 Day-Night Percentages with the Proposed Air Carrier or Commuter Runway  
 Environmental Impact Statement for Proposed New Runway at MIA

Aircraft Category	Aircraft Type	Average Daily Operations	Arrivals Day	Arrivals Night	Departures Day	Departures Night
Commercial	B747	96.76	41.12	7.26	40.64	7.74
	A300	69.98	29.04	5.95	27.99	7.00
	B767-CF6	44.99	18.67	3.82	18.00	4.50
	B767-300	15.00	6.23	1.28	6.00	1.50
	DC10-30	36.66	15.21	3.12	14.66	3.67
	DC8-70	154.36	47.85	29.33	60.97	16.21
	B757-RR	116.45	46.58	11.65	55.90	2.33
	MD83	62.66	26.94	4.39	29.45	1.88
	B727-EM1*	266.27	114.50	18.64	125.15	7.99
	B727-EM2*	193.20	83.08	13.52	90.80	5.80
	B737-300	72.73	33.09	3.27	32.73	3.64
	F100	28.28	12.87	1.27	12.73	1.41
	SF340	135.32	66.31	1.35	60.89	6.77
	DHC8	72.86	35.70	0.73	32.79	3.64
	CNA441	203.38	98.64	3.05	94.57	7.12
DHC6	71.46	34.66	1.07	33.23	2.50	
Military	C130	7.67	3.53	0.31	3.53	0.31
	707-320	5.77	2.65	0.23	2.65	0.23
	KC135R	2.86	1.32	0.11	1.32	0.11
	KC135B	2.86	1.32	0.11	1.32	0.11
GA Jet	Lear 35	51.45	21.61	4.12	21.61	4.12
	Lear 25	23.23	9.76	1.86	9.76	1.86
	CIT3	8.30	3.49	0.66	3.49	0.66
GA Prop	GASEPF	34.94	15.02	2.45	15.02	2.45
	BEC58P	69.87	30.04	4.89	30.04	4.89
	CNA441	30.57	13.15	2.14	13.15	2.14
<b>Total</b>		<b>1877.88</b>	<b>812.37</b>	<b>126.57</b>	<b>838.38</b>	<b>100.56</b>

\* These aircraft will be retrofitted to Stage 3 conformance standards required by federal legislation.

Source: TSI, 1998.

TABLE 4-12  
 2000 Day-Night Percentages with the No-Action Alternative  
 Environmental Impact Statement for Proposed New Runway at MIA

Aircraft Category	Aircraft Type	Average Daily Operations	Arrivals Day	Arrivals Night	Departures Day	Departures Night
Commercial	B747	60.08	24.03	6.01	23.63	6.41
	A300	58.48	22.61	6.63	21.44	7.80
	B767-CF6	37.60	14.54	4.26	13.79	5.01
	B767-300	12.52	4.84	1.42	4.59	1.67
	DC10-30	30.62	11.84	3.47	11.23	4.08
	DC8-70	141.16	34.82	35.76	50.82	19.76
	B757-RR	106.49	39.04	14.20	50.41	2.84
	MD83	59.53	24.21	5.56	27.38	2.38
	B727-EM1*	252.98	102.87	23.62	116.37	10.12
	B727-EM2*	183.54	74.64	17.13	84.43	7.34
	B737-300	73.34	32.27	4.40	31.78	4.89
	F100	28.52	12.55	1.71	12.36	1.90
	SF340	114.87	55.90	1.53	49.78	7.66
	DHC8	61.85	30.10	0.83	26.80	4.12
	CNA441	212.47	101.99	4.25	96.32	9.91
DHC6	76.64	35.83	1.49	33.84	3.48	
Military	C130	7.67	3.43	0.41	3.43	0.41
	707-320	5.77	2.58	0.31	2.58	0.31
	KC135R	2.86	1.28	0.15	1.28	0.15
	KC135B	2.86	1.28	0.15	1.28	0.15
GA Jet	Lear 35	49.51	19.47	5.28	19.47	5.28
	Lear 25	22.36	8.80	2.38	8.80	2.38
	CIT3	7.98	3.14	0.85	3.14	0.85
GA Prop	GASEPF	33.62	13.67	3.14	13.67	3.14
	BEC58P	67.24	27.34	6.28	27.34	6.28
	CNA441	29.42	11.96	2.75	11.96	2.75
<b>Total</b>		<b>1737.99</b>	<b>715.02</b>	<b>153.97</b>	<b>747.91</b>	<b>121.08</b>

\* These aircraft will be retrofitted to Stage 3 conformance standards required by federal legislation.

Source: TSI, 1998.

TABLE 4-13  
 2005 Day-Night Percentages with the No-Action Alternative  
 Environmental Impact Statement for Proposed New Runway at MIA

Aircraft Category	Aircraft Type	Average Daily Operations	Arrivals Day	Arrivals Night	Departures Day	Departures Night
Commercial	B747	96.76	35.68	12.70	34.83	13.55
	A300	69.98	24.58	10.41	22.74	12.25
	B767-CF6	44.99	15.80	6.69	14.62	7.87
	B767-300	15.00	5.27	2.23	4.88	2.63
	DC10-30	36.66	12.88	5.45	11.91	6.42
	DC8-70	154.36	25.86	51.32	48.80	28.36
	B757-RR	116.45	37.85	20.38	54.15	4.08
	MD83	62.66	23.65	7.68	27.49	3.84
	B727-EM1*	266.27	100.52	32.62	116.83	16.31
	B727-EM2*	193.20	72.93	23.67	84.77	11.83
	B737-300	72.73	30.64	5.73	30.00	6.36
	F100	28.28	11.91	2.23	11.67	2.47
	SF340	135.32	65.29	2.37	55.82	11.84
	DHC8	72.86	35.15	1.28	30.05	6.38
	CNA441	203.38	97.62	4.07	89.23	12.46
DHC6	71.46	34.30	1.43	31.35	4.38	
Military	C130	7.67	3.30	0.54	3.30	0.54
	707-320	5.77	2.48	0.40	2.48	0.40
	KC135R	2.86	1.23	0.20	1.23	0.20
	KC135B	2.86	1.23	0.20	1.23	0.20
GA Jet	Lear 35	51.45	18.52	7.20	18.52	7.20
	Lear 25	23.23	8.36	3.25	8.36	3.25
	CIT3	8.30	2.99	1.16	2.99	1.16
GA Prop	GASEPF	34.94	13.19	4.28	13.19	4.28
	BEC58P	69.87	26.38	8.56	26.38	8.56
	CNA441	30.57	11.54	3.74	11.54	3.74
<b>Total</b>		<b>1877.88</b>	<b>719.15</b>	<b>219.79</b>	<b>758.37</b>	<b>180.56</b>

\* These aircraft will be retrofitted to Stage 3 conformance standards required by federal legislation.

Source: TSI, 1998.