

**Verifying the Assumptions
& Conclusions of the
Environmental Impact
Statement for the Proposed
South Runway Extension**

**A Report to the
Broward County Commission**

February 19, 2003



Background and Findings

In September, 2002 the Broward County Commission tasked the Clean Airport Partnership (CAP) with responsibility for assembling a team of experts for purposes of validating the assumptions and conclusions of the Supplementary Draft Environmental Impact Statement (EIS) and reporting back to the Commission with its findings. The EIS with its supplements concluded that a 9000 foot extension of runway 9R is the “preferred alternative” for maximizing capacity, operational flexibility, and avoiding excessive delays at Fort Lauderdale-Hollywood International Airport (FLL).

After completing its analysis, CAP finds that in its current form, the EIS fails to support its selection of the preferred alternative. The EIS fails to show that delays will become excessive in the near term absent construction of an extended runway (“no build”); it fails to evaluate potentially feasible alternatives; and it fails to conduct a thorough and accurate assessment of the alternatives compared to the “no build” option.

The purpose and need should be rewritten to narrow the consideration of alternatives or the review of “comparable” alternatives should be expanded. Additionally, the desire to close the crosswind runway should be stated within the purpose and need of the EIS and analyzed if that is the intention of Broward County. Doing otherwise postpones the date by which delays at the airport would become excessive, which means that the urgency to advance the project becomes severely diluted.

The age of the Master Plan and EIS also compromises the accuracy of both data and conclusions. Options for shortening the proposed 9000 foot extension of 9R, while intriguing, cannot be accurately analyzed within the context of the purpose and need of the current EIS. This work may be best accomplished through an update to the Master Plan.

Implications of expanding use of the crosswind runway, growing traffic at FLL, and the significant delays projected—absent use of the crosswind runway—argues for the Commission moving with all deliberate

speed in expanding capacity at FLL. However, the failures of the EIS are profound and there is no evidence that a Record of Decision (ROD) on this project is imminent. Therefore, the Commission is well advised to take the time needed to affirm its direction and verify whether the EIS and runway can be most expeditiously completed through a third supplement to the EIS or whether these goals can be better achieved and integrity to the process better restored through an update to the Master Plan in tandem with a fundamental rewrite of the EIS.

The report that follows explains the logic of these findings and recommends steps for going forward.

Fundamental Errors in the EIS

The Purpose and Need of the EIS is Inconsistent with the Review of Alternatives

“Purpose and need” compose two of the three legs of the EIS, with the third being the review of alternatives. Both the purpose and need of the runway as stated within EIS are faulty. They are intended to increase airfield capacity to avoid delays and to “accommodate future fleet” mix through a second runway “with takeoff and landing lengths *comparable...*” to those of the North runway.

An implicit part of the EIS is the intention of the FAA and Broward County to support a runway consistent with Interlocal Agreements and the 9000 foot extension identified in the 1994 Master Plan. However, the purpose and need of the EIS as currently drafted are worded too broadly to support the specific goal of a 9000 foot runway and instead exposes the fact that the EIS should have considered runway alternatives shorter in length although “comparable” to the 9000 foot North runway (9L). These shorter runway length alternatives became more viable and should have been identified as the fleet of airlines and aircraft using FLL modernized over the past ten years.

Through its review of the alternatives, the EIS assumes that the purpose and need dictates that the

EIS only consider runway alternatives of 9000 feet. This is an erroneous conclusion because “comparable” and “identical” do not mean the same thing. This is best illustrated by the 9000 foot South runway extension as proposed, which is actually equivalent to an 8500–8700 foot runway due to the .5% uphill gradient—and shorter yet, due to the displaced threshold required for landing on Runway 9R. This is important because it affirms that the definition of “comparable length” is not the same thing as “identical length”. Due to its shorter equivalent length, international and long-haul flights would still use the North runway. This means that the runway as proposed in the EIS would “accommodate” *most but not all* of the future fleet mix. It also helps to illustrate that “comparable” and “accommodate” are inexact standards that allow the consideration of runway lengths within a finite but undefined range.

Either the purpose and need must be rewritten to more clearly define the runway lengths that must be considered or the review of alternatives should be broadened to consider other “comparable” runway lengths. If the consideration of alternatives is expanded, the EIS should also provide delay forecasts for these other lengths that would project their capability of those alternatives to address capacity needs.

The Methodology for Reviewing Alternatives is Erroneous and Incomplete

The third leg of the EIS is the review of alternatives. This section is perhaps most troubling because it reflects a basic failure to understand the fundamental requirements of an EIS.

The alternatives section of the EIS is intended to help illustrate why the project is most appropriate for meeting the purpose and need. This is accomplished by comparing the costs and benefits of the alternatives against the no-build option. It should also show accurately, what would happen if no additional capacity is provided. The EIS fails to accomplish this requirement for several reasons.

First, the EIS incorrectly compares the preferred

alternative to the other “build” alternatives rather than to the no-build option, which serves to severely bias the document in favor of the preferred alternative.

Second, the EIS fails to correctly analyze the no-build alternative. As noted earlier, it assumes that the crosswind runway would not be used to reduce delays which means that the urgency to advance the project may be overstated. It also fails to document a major benefit of South runway extension which would be to relieve the significant projected noise impacts resulting from expanded use of the crosswind runway.

Third, the EIS fails to analyze runway alternatives comparable and shorter in length to 9L and to analyze the impacts of these alternatives especially in terms of their ability to avoid or further minimize wetlands impacts.

Complications Are Posed by the Age of the Master Plan and the SDEIS

We are troubled by the age of the Master Plan, which was completed in 1994 and the EIS, which has been in process since that time and includes data from 1992 and earlier. Many things have changed over the last several years: (1) a new international terminal and Intermodal Transportation Center have been proposed, (2) several low-cost carriers have chosen FLL as a primary South Florida destination, (3) new information on the projected aircraft fleet mix and shorter runway requirements is available, (4) the restructuring of the airline industry, and (5) Broward County residents have expressed their strong commitment to open space protection and quality of life issues. All have links to the proposed runway extension at FLL. The implications of the decision faced by the County Commissioners have become profoundly more complicated than ten years ago. It is not just the span of time, but the enormity of the changes that have occurred cumulatively over the last several years that call into question the age of both the Master Plan and EIS.

Because of its age, the EIS includes information and assumptions that are outdated. As but one isolated example, the two primary reasons stated in the EIS

as to why alternative E was rejected (rebuilding the South runway 500 feet to the North), was that it would prohibit the construction of Concourses I, and J of the proposed South Terminal (and retain existing Concourse H) and it would destroy 52 acres of wetlands.

Since the EIS was undertaken and the Master Plan completed, old aircraft have been replaced with newer aircraft, reducing runway length requirements for landings and take-offs and altering projected noise contours. These changes have been accelerated through the recent and dramatic restructuring of the airline industry.

A new long-term development plan, 2020 Vision, has been proposed and now Commissioners are asked to endorse *a South International Terminal with no concourses that would be impacted*. This change is not reflected in the SDEIS. Additionally, a significant portion of the wetlands that are said to be impacted have already been drained and filled for new access roads that are currently under construction and other projects reducing the magnitude of the projected wetlands impact.

Further, in contrast to the EIS documentation, the South Florida Water Management District has advised CAP that as many as 32 (not 21 acres) of wetlands may be directly and indirectly impacted by the proposed South Runway extension. If this holds true, it is conceivable that the projected wetlands impacts of the 9000 foot South extension and the alternative E alignment could actually be comparable and the noise impacts on the community to the south would be less. Again, these changes are not noted in the SDEIS although they directly influence the weighting of Alternative E compared to the preferred option.

We are not suggesting that alternative E is a viable option because there may be other reasons for its rejection that are not properly documented in the EIS documents. But it does illustrate how more accurate information might affect conclusions and can be factors that trigger litigation.

None of these considerations may change the need to expand the runway to 9000 feet. But it does present new variables that *could* influence decision-making and in so doing, raises further questions about the defensibility of the EIS. Individually, many of the shortcomings of the EIS may be rectifiable. Cumulatively, however, the weight of these shortcomings is considerable. BCAD is in the process of completing new research on the projected impact on property values, FAA has completed updated analyses of noise contours, FAA is responding to the concerns raised by Peter Kirsch, an attorney with nationally acknowledged expertise in airport expansion EIS development, the County is considering whether to pay a contractor to complete a supplement to the supplement to the supplement to help fortify the EIS, and others are demanding information on subjects not yet addressed.

The Delay Analysis is Misleading

First, the need to minimize delays is one of the fundamental reasons stated in the EIS for expanding capacity and selecting the preferred option. The EIS assumes that under no-build alternative the crosswinds runway would be used to accommodate less than 1% of the total aircraft operations. This assumed usage pattern serves to artificially and materially overstate the forecast delay figures of the no-build situation. In fact, according to our conversations with FAA, as delays on the North runway threaten to become excessive, it is likely that the crosswinds runway would be used extensively. This oversight in the EIS results in a false representation of the date by which delays at the airport would become excessive, which means that the urgency to advance the project may be overstated.

We recognize and are concerned that the use of the crosswind runway to relieve actual delays has the potential of newly exposing many residents to additional noise. Unfortunately, the EIS fails to provide any reliable information as to when this will occur or the magnitude of the exposure. Therefore, it is impossible to properly assess the impacts of any alternative runway proposal relative to the no-build case based upon the information in the EIS.

Second, the EIS projects that average delays of 33.9 minutes per aircraft operation in 2015 would be reduced to 1.3 minutes per aircraft operation with implementation of the preferred alternative. However, FAA's own guidance documents for analyzing investments states: "A second area of caution in simulation modeling concerns the finding of very large per operation delay savings attributable to investments. In particular, [one] should be skeptical of the validity of per operations delay savings of 10 minutes or more resulting from an investment. [It] would be unrealistic to conclude that an investment would save more than 20 minutes of delay per operation relative to the base case." This brings one to conclude that the benefits of the preferred alternative, in terms of projected reductions in delay, may not be realistic.

Potential Strategies for Expanding Capacity and Reducing Environmental Impacts May be Difficult to Fully Analyze Within the Context of the EIS

Making an explicit choice to shorten the proposed 9000 foot extension of 9R to further minimize environmental impacts does not appear to be an option that falls within the purpose and need of the current EIS. Validation of these alternatives would require extensive analysis that may be best accomplished in the context of an update to the 1994 Master Plan—not the EIS.

However, research conducted for CAP by Leigh-Fisher Associates (LFA) for purposes of validating the preferred alternative may provide useful insights (see Appendix). For example, while the LFA analysis is subject to certain limitations, it suggests that a South runway extension of approximately 8500 feet may be able to accommodate more than 90% of all projected air carrier landings and departures and about 95% of total airport operations by aircraft of all types. In contrast, the EIS estimates that the 9000 foot South extension as proposed would actually be used by only 85% of future departing flights and

approximately 11% of arriving flights. If the LFA analysis holds true, it may be possible to construct a runway shorter than 9000 feet to further minimize wetlands impacts, without a reduction in capacity or a material change in operational flexibility.

Recommendations for Going Forward

Regardless of whether Broward County chooses to fix the EIS or initiate a more fundamental overhaul, we urge that action be taken immediately to assert leadership and control over the EIS process—and the major work that will follow. Typically, when an airport such as FLL begins the EIS process they will retain an independent team including an attorney, a public relations expert, and process specialist to shepherd the process and to help insure completion of a top quality document. This supervision is commonly welcomed by FAA to help insure that oversights do not occur and that the best interests of the applicant are protected.

In this case there has been an unusual deference to FAA guided by the misapprehension that this is "FAA's EIS" and therefore, the onus is upon them to protect Broward County's interests. This may be FAA's EIS in name but it is clearly Broward County's EIS in deed. The runway expansion comes at the initiation of Broward County, not FAA. Broward County and not FAA has paid for the overwhelming majority of the cost of the EIS and its supplements. Broward County, not FAA, suffers most directly from the implications of a faulty EIS and the concomitant delays that result. This is Broward County's project.

To right this process we recommend that Broward County assert its leadership and control through the following actions.

First, Broward County should immediately assemble a supervisory team of in-house and outside experts with special expertise in runway expansion projects. This team, which could be overseen by County staff or directly by the Commission, would assume primary responsibility for guiding completion of the EIS in whatever form it may take,

initiating those actions deemed necessary to improve relations with surrounding communities and other interests, and shepherding the process through to completion. We are confident this renewed leadership can be asserted in cooperation and with the full support of FAA.

Second, Broward County must affirm its direction. Either it must support construction of a runway that is consistent with the 1994 Master Plan and complies with the obligations of the Interlocal Agreements; or it can decide to explore other options. Shortening the proposed 9R runway extension for purposes of further minimizing wetlands impacts, mitigating noise impacts, or for other reasons may be best accomplished through an update to the Master Plan, which may also result in a more fundamental rewrite of the EIS.

Third, before considering further investments in fixing the current EIS process, a letter should be sent to FAA seeking clarification on the comprehensive nature of the improvements that must occur to make the EIS sound. Most importantly, this letter should seek written assurance from FAA that it will commit to issue a ROD when this work is completed. To do otherwise runs the risk that Broward County will continue to invest endlessly in supplements to the EIS.

Fourth, if the County decides to proceed with the existing EIS, it is imperative that a second legal opinion be obtained independent of FAA, regarding whether the present document can be corrected, the magnitude of the work involved, and the likely schedule for obtaining the ROD. By the time the third supplement to the EIS is completed, these supplements en masse will likely consume 3-4 years. According to FAA, an EIS for a runway extension can typically be completed within 3 years. The Master Plan may require a similar amount of time. Currently, both Chicago O'Hare and Philadelphia are undertaking these processes in tandem to reduce the total time required.

Fifth, if the County decides to proceed with the existing EIS, it should take steps immediately to restore credibility in this EIS process and the project itself. Miami and Palm Beach started their EISs at

the same time as FLL. They took three years to complete and FLL's is now approaching ten. This is not a typical process. Some opposition to this project is inevitable but a significant portion is due to the piecemeal manner in which the EIS has and continues to be constructed, its failure to address specific substantive questions, and the sense by many citizens—rightly or wrongly—that information they have requested and in some cases been promised has not been forthcoming. The fact that much of this substantive analysis is occurring after the conclusions of the EIS have been reached, serves to further undermine the overall credibility of the document, its conclusions, and jeopardizes the future of the project.

Establishment of a supervisory team that will focus upon correcting deficiencies in the process is an important step in improving community relations. The first action taken by this team should be to meet individually or together with those interests both concerned about and supportive of the proposed expansion, to define steps that can be taken to restore credibility now and to maintain it in the future. The EIS is only one small part of completing this project. Even more contentious issues follow, including the development and implementation of effective noise and environmental mitigation plans. If the County chooses to take the path of supplementing the current EIS, we urge that it carefully examines the capabilities of whomever is selected to complete the work.

Sixth and finally, to minimize future delays in correcting the EIS and bringing this project to completion, it is also essential that Broward County consider strategies for streamlining the procurement process and making contract revisions quickly to address ever-changing needs. These changes will provide contractors with the flexibility required to generate quality products on short schedules and will help to shorten the timeframe for project completion.

Mitigation of Impacts

The impacts of the preferred alternative on wetlands east of the airport, homeowners near the airport, and John U. Lloyd Park will be significant and should

not be minimized. *If* the County decides to pursue this course through revisions to the EIS, we suggest that Broward County revise and supplement composition of the Airport Task Force so that it can immediately begin establishing a comprehensive and enforceable plan to address the projected impacts of the proposed expansion on Broward County residents. The intention is to expand the agenda of this group and representation by neighborhood groups, not to pre-empt other important issues that the Task Force may still be pursuing. Recommendations for enforcing the Interlocal and addressing other impacts should be presented to the Commissioners and implemented *prior to any final approval of the South runway extension*. To protect homeowners and the Parks we suggest a program that may include but should not be limited to the following initiatives:

First, the Interlocal Agreements are by far the most progressive we have seen anywhere in the country. It is critical to FLL's eventual expansion that these agreements are enforced through the ROD or other means. Establishing this enforcement mechanism should be an essential element to the Commission's approval for any expansion that impacts residents and their homes.

Second, a program should be explored for providing neighboring residents with long-term protection against actual, as opposed to projected, diminution in property values attributable to noise impacts. If this should occur, a method should be considered for potentially compensating residents for this loss in value.

Third, standards should be considered for lowering the noise impact for John Lloyd State Park from the 70 dNL levels currently projected under the 2015 unconstrained scenario. It is possible that lower noise levels could be achieved through voluntary mechanisms utilized at the discretion of pilots including "powering back" upon departure. The use of financial incentives and public recognition for select airlines may prove valuable in encouraging quieter operations. CAP also suggests that the Task Force explore methods by which the Airport can improve the quality of the Park including methods to create a habitat more conducive for nesting turtles and reducing ocean debris which poses ongoing hazards to marine life.