

CHAPTER 6.0 MITIGATION

6.1 INTRODUCTION

This chapter of the Draft Environmental Impact Statement (DEIS) presents mitigation measures developed by the Federal Aviation Administration (FAA) and the Palm Beach County Department of Airports (Airport Sponsor) to minimize or compensate for the unavoidable environmental impacts associated with the proposed improvements to Palm Beach International Airport (PBIA). Both alternatives retained for detailed analysis in [Chapter 5.0](#) of this DEIS – the Proposed Project and Alternative 2 – would result in unavoidable environmental impacts to several resource categories that warrant mitigation. These resource categories include:

- Aircraft Related Noise, and
- Compatible Land Use.

Potential mitigation measure concepts that could apply to both alternatives are identified in [Section 6.2](#). Due to ongoing coordination with various resource agencies and the Airport Sponsor, these measures are disclosed for preliminary consideration and may or may not result in practicable mitigation for the impacts associated with the Proposed Project or Alternative 2.

[Section 6.3](#), which will be expanded for the FEIS, describes the mitigation program for the Preferred Alternative that will be implemented by the Airport Sponsor, if approved by the FAA in its Record of Decision (ROD). In all cases, the mitigation measures will be implemented prior to or in conjunction with, the realization of the actual impacts.

6.2 MITIGATION CONCEPTS FOR THE PROPOSED PROJECT AND ALTERNATIVE 2

6.2.1 NOISE

As discussed in the [Section 5.12](#), both the Proposed Project and Alternative 2 would result in significant noise impacts based on FAA guidelines (noise sensitive areas where the change in noise exposure is in excess of DNL 1.5 within the DNL 65 contour).

There are several types of mitigation measures that can be used to off-set significant aircraft noise related impacts including:

- Operational measures to change the size and/or shape of the noise contours to result in fewer impacts;
- Land use measures to modify or improve the affected areas; and
- Program management measures to implement, monitor, and manage an established noise mitigation program;

The following is a brief overview of each of these types of mitigation measures. It is possible that the FAA and the Airport Sponsor will choose to implement one or more of these measures in the FEIS to mitigate the significant noise impacts associated with the Proposed Project and Alternative 2.

6.2.1.1 Operational Measures

Throughout the EIS process, there have been detailed discussions and coordination with the PBIA Airport Traffic Control Tower (ATCT) to determine how the airport would be expected to operate in the future, both with and without the Proposed Project and Alternative 2. These discussions included any alteration of current operating procedures for all future years and alternatives. After applying these discussions to the information used for the noise modeling, the PBIA ATCT was again consulted to determine if there were any operational measures that could be undertaken to reduce the noise impacts of either the Proposed Project or Alternative 2. Based on the location of the projected noise impacts and the implementation of the Radar Navigation (RNAV) departure procedures by 2011, the PBIA ATCT determined that there are no operational procedures that could be implemented to reduce projected noise impacts. The PBIA ATCT indicated that several factors led to this determination, such as the interaction with aircraft operating at other airports within the region, required aircraft arrival positioning, and the limits of aircraft performance characteristics. Therefore, aircraft operational measures were not considered a viable means of mitigation for significant noise impacts.

6.2.1.2 Land Use Measures

After consultation between the FAA and the Airport Sponsor, it was determined that several remedial land use measures could be undertaken by the Airport Sponsor as reasonable and practicable mitigation measures for significant noise impacts. The measures that are being considered by the Airport Sponsor include the following:

- Acquisition and Relocation of homes,
- Purchase of an Avigation Easement,
- Sound Insulation in exchange for an Avigation Easement, and
- Purchase Assurance.

The following is a brief description of each of these potential mitigation measures.

Acquisition and Relocation

Acquisition of land/homes for noise compatibility purposes is an option that may be made available by the Airport Sponsor. Under this measure, the Airport Sponsor would acquire non-compatible property within the designated eligible areas and relocate the occupants from the noise impacted area. Acquisition would require a Fair Market Value (FMV) to be determined for each property by an independent appraisal. Once that has been reviewed, the Airport Sponsor would determine “just compensation” for the property, which would be not less than the appraised value. Once an offer has been submitted and accepted, the home is acquired by the Airport Sponsor, the residents are relocated, and the structure is

demolished. Any acquisition and relocation that would be accomplished under this measure would be in conformance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (Public Law 91-646, as amended) and Title 49 CFR Part 24. Once the acquisition and relocation is completed, the acquired land is assembled for reuse by the Airport Sponsor as an airport compatible use.

Purchase of Avigation Easements

An easement is a conveyance of a property interest for a defined use of a specified area that restricts the owner's use of the easement-encumbered property. Easement rights conveyed that "run with the land" continue to burden the encumbered property and restrict any subsequent owners of the encumbered property. The interest in the land is recorded with the property deed and transfers from owner to owner.

A property owner who conveys an easement is compensated for the encumbrance placed on the noise impacted property. Compensation for the easement conveyed as a remedial measure on noise impacted property is properly appraised based on the loss in value to the noise impacted property due to the additional encumbrance. Therefore, this compensation owed for the easement purchase is expected to be nominal on property that does not experience an increase from the existing noise impact. Valuation guidance is provided in FAA Order 5100.38C, *Airport Improvement Program Handbook* (FAA, 2005a), and FAA Order 5100.37B, *Land Acquisition and Relocation Assistance for Airport Projects* (FAA, 2005c).

An avigation easement provides the airport sponsor the right-of-flight of aircraft at any altitude above the acquired imaginary surfaces and the right to create noise, vibrations, dust, fumes, etc. without incurring any liability. An avigation easement makes the encumbered property compatible with airport operations.

Easement acquisition may be an effective remedial measure when offered as an option in conjunction with purchase assurance or sound insulation measures. For the property owner who may not want to move from the noise impacted area, the easement acquisition offers comparable monetary compensation for the easement encumbrances as offered under the purchase assurance measures. For properties where adequate sound insulation is not feasible (e.g., condition of structure, unsuitable design and/or construction of structure), purchase of an avigation easement is a viable alternative.

Sound Insulation in Exchange for an Avigation Easement

Sound Insulation significantly reduces the aircraft noise interference with indoor household activities such as sleeping, talking, and watching television. Installation of noise insulation materials usually involves reducing aircraft noise levels inside noise-sensitive structures by decreasing the paths by which sound enters a building. Basic noise insulation methods include replacement of windows and doors, sealing and weather-stripping openings, adding thermal insulation in the attic, installing acoustic baffling in vents, and installing acoustically treated ceiling and wall panels. Usually, these types of modifications have the added benefit of conserving air conditioning and heating.

An easement conveyance may be a component of soundproofing assistance. The FAA encourages that a noise easement accompany soundproofing to provide the acknowledgement and notice to subsequent purchasers that the airport has mitigated the noise impact by sound attenuation improvements made to

the property. The Airport Sponsor would obtain an aviation easement in exchange for sound insulation of the home.

Purchase Assurance

Purchase Assurance is a variation of Acquisition, but does not eliminate noncompatible land uses. It does, however, provide the opportunity for noise sensitive homeowners to sell their home to someone that is less noise sensitive or wanting the convenience of living close to the airport. Purchase Assurance programs assure homeowners in noise-impacted areas that they will be able to sell their property, within a specified period of time. Under a Purchase Assurance program, a property that fails to sell within a specified time period is purchased by the Airport Sponsor and then resold for continued residential use. The Airport Sponsor purchases the property at the appraised FMV of the homeowners' fee interest "as is," subject to airport noise. Typically, sound insulation is provided and the property is then listed and sold subject to the airport's aviation easement. Under this program, the Airport Sponsor would obtain an aviation easement at the time of sale even if the sale was through the original homeowner. Relocation benefits are not provided with the Purchase Assurance program.

6.2.1.3 Program Management Measures

While this EIS is only mitigating for the areas where the change in noise exposure would be in excess of DNL 1.5 within the DNL 65 contour, the Airport Sponsor acknowledges that there will be additional homes brought into the DNL 65 contour as a result of the Proposed Project or Alternative 2. The Airport Sponsor may initiate an update to their current FAR Part 150 Noise Compatibility Program to mitigate noise impacts to these additional homes.

6.2.2 RESIDENTIAL AND BUSINESS RELOCATIONS

As discussed in [Chapter 5.0](#), Environmental Consequences, both the Proposed Project and Alternative 2 would require the acquisition of land and the relocation of business and/or homes. Under the Proposed Project, fifteen off-airport commercial properties, four on-airport commercial properties, and five residential properties within the Runway Protection Zone (RPZ) for proposed Runway 9R would be acquired and relocated for the purpose of the Airport Sponsor maintaining positive control of all land uses within the RPZ. In addition, the Proposed Project would require the relocation of General Aviation support facilities/Fixed Base Operators (FBO's) from the southeast quadrant of the airport to the northwest quadrant of the airport.

Under Alternative 2, eleven commercial properties, all located within the RPZ of proposed new Runway 9L, would be acquired and relocated for the purpose of the Airport Sponsor maintaining positive control of all land uses within the within the RPZ.

The acquisition of relocation of both commercial and residential properties would be the responsibility of the Airport Sponsor. However, since the relocations would occur as a result of a Federal undertaking, the relocations would need to be accomplished under the guidance and procedures contained in the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended (Uniform Act).

Review of land use maps, tax records, and other documentation available from the County indicates that available replacement housing exists in Palm Beach County to accommodate displaced residents. Likewise, sufficient commercial property, both buildable vacant land and improved leasable space, is available in Palm Beach County to accommodate the relocation of the commercial properties. It is anticipated that the General Aviation support facilities/FBO's that would be relocated under the Proposed Project would all relocate to the northwest quadrant of the airport, where the Airport Sponsor has developed preliminary on-airport land use plans to accommodate both existing and future general and corporate aviation needs. More specific details of the acquisition/relocation program will be provided in the FEIS, after a Preferred Alternative has been identified by the FAA.

6.3 *MITIGATION MEASURES FOR THE PREFERRED ALTERNATIVE*

Mitigation measures for the FAA's Preferred Alternative will be committed to and implemented by the Airport Sponsor, if the proposed runway and other airfield improvements are approved by the FAA in its ROD. The mitigation program will be developed to comply with pertinent laws and regulations, after consideration of public comments, and through coordination with affected parties and applicable agencies. The mitigation program will outline specific mitigation program elements for each environmental impact category for which mitigation is warranted.

The primary responsibility for implementation of the mitigation program elements lies with the Airport Sponsor. Where appropriate, approval and concurrence from agencies having jurisdiction will be obtained by the Airport Sponsor prior to the implementation of the mitigation measures.

Since the construction of the Preferred Alternative will include the requirement for the Airport Sponsor to obtain multiple Federal, state, and local permits, the details of the specific mitigation measures including their quantity, location and performance characteristics will not be finalized until the actual permits are granted.