

6. J. CONCEPTUAL MEASURES CONSIDERED FOR THE AVOIDANCE/MITIGATION OF ADVERSE ENVIRONMENTAL IMPACTS

The National Environmental Policy Act (NEPA) of 1969, implicitly requires the discussion of mitigation measures by requiring that an Environmental Impact Statement (EIS) discuss "any adverse environmental effects which cannot be avoided."⁹⁶ The Council on Environmental Quality (CEQ) regulations implement this by requiring the discussion of mitigation measures in impact statements.⁹⁷ In 40 C.F.R. 1508.20, the CEQ defines "mitigation" to include:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action;
- (b) Minimizing the impacts by limiting the degree or magnitude of the action and its implementation;
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

The FAA has incorporated the requirement to include discussion of mitigation measures as a part of the EIS process in FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, Chapter Five, Paragraph 506h, *Mitigation*, which requires that the EIS describe mitigation measures considered or planned to minimize harm from the proposed action. Mitigation measures that are considered or planned to minimize harm from the proposed action include:

- Design and construction actions to avoid or reduce impacts
- Design measures that reduce impacts
- Management actions that reduce impacts during operation of the facility
- Replacement, restoration (reuse, conservation, preservation, etc.), and compensation measures

Pursuant to the NEPA and CEQ directive and FAA Order 1050.1E, this section of the Draft EIS includes conceptual mitigation measures that the FAA would consider as part of the proposed project or alternatives. As the EIS process continues, mitigation measures will be more discretely defined.

The FAA may decide that it will not proceed with Federal actions necessary to a development project unless an airport sponsor commits to implementing specific mitigation measures. (i.e., Such an FAA decision ordinarily appears in the Record

⁹⁶ Section 102(2)(C).

⁹⁷ 40 C.F.R. §§ 1502.14(f), 1502.16(h)

of Decision (ROD) that follows the Final EIS.) The FAA can foster sponsor compliance with mitigation measures by imposing special conditions, funding agreements, contract specifications, directives, other review or implementation procedures and other appropriate follow-up actions in accordance with 40 CFR 1505.3.

This Draft EIS identified few potential impacts associated with the runway development alternatives. The following discussion presents mitigation possibilities for only those categories - noise, wetlands, endangered or threatened species, and essential fish habitat - where potential impacts were identified.

NOISE AND COMPATIBLE LAND USE

As part of the EIS process, the FAA examines noise mitigation measures for noise-sensitive areas inside the 65 Day-Night Average Sound Level (DNL) and higher noise contours. Generally, the need for mitigation increases as noise levels increase and varies according to the sensitivity of the affected land use. Mitigation possibilities are ordinarily developed once the FAA identifies its preferred alternative.

Because this Draft EIS does not identify a preferred alternative, it is appropriate to name the measures, in general, that could be addressed and documented in the Final EIS. These include: development of aircraft and airfield operational controls (including voluntary noise abatement procedures); acquisition of aviation easements; acquisition of property; relocation of property; or sound insulation. Because Broward County has begun a FAR 14 CFR Part 150 Noise Compatibility Study Update (Update) for FLL (See Chapter Five), measures identified in the document may be recommended or considered for inclusion in the Final EIS.

When the preferred alternative is selected, the FAA will develop appropriate mitigation measures. If Alternatives B1, B1b, B1c, B5, or D1 were selected, all or a portion of, the Wyndham Fort Lauderdale Airport Hotel would have to be acquired. Acquisition or relocation of most facilities involves payment of relocation assistance and moving expenses, consistent with the Federal *Uniform Relocation Assistance and Real Property Acquisition Policies Act* (49 CFR Part 24).

MITIGATION FOR WETLAND IMPACTS

Areas of concern include direct loss of wetland acreage, effects on West Lake Park, intrusion into the Dania Cut-Off Canal, and hydrologic loss from new or modified access roads. Direct loss of wetlands attributable to the various runway development alternatives ranges from 0.13 acres to 21.87 acres.

Since the beginning of this EIS process, minimizing impacts to wetlands was considered in developing alternatives to the Airport Sponsor's proposed project. Each of the resulting runway development alternatives B1, B1b, B1c, B5, and D1 includes a shortened approach light system that complies with FAA design standards, at the same time reducing the wetland area needed for system installation. The proposed approach light installation scheme reduces wetland

impacts by 0.57 acres and avoids impacts to West Lake Park. (Broward County has already committed to the use of a modified runway approach light system for the Airport Sponsor's proposed project.⁹⁸)

Operation of the runway approach light system requires installation of cables in the vicinity of the Dania Cut-Off Canal. These cables would be installed through directional drilling or a comparable method. This technique places the cables below the bottom of the canal, which avoids impacts to the canal bottom and avoids impacts to the aquatic habitat adjacent to and within the canal.

The construction of new or modification of existing access roads varies for each runway development alternative. The location of new access roads to assist in the maintenance of the approach light system, may impede the underlying flow of water. The maximum direct impact width assigned to access roads is 25 feet with the length of the access roads varying by alternative. As described in this Draft EIS, the access roads are to be designed with sufficient cross-road culverts to allow tidal waters to flow freely. The culvert arrangement would avoid creating measurable secondary hydrologic impacts on the surrounding wetlands. Construction options for further reduction of potential impacts would be evaluated once a preferred alternative is identified.

Typically, the FAA encourages development of conceptual mitigation during EIS development, in coordination with the U.S. Army Corps of Engineers (USACE) and state or local regulatory agencies. It is the Airport Sponsor's responsibility to continue the mitigation process throughout the permitting process mandated by these regulatory agencies. Broward County has permits from the South Florida Water Management District (SFWMD) and the USACE that allow for habitat restoration and enhancement within West Lake Park. Depending on the extent and duration of these permits, some of the existing wetland mitigation credits described in these permits may be applied to existing and future projects at FLL and the Port.

Continuing coordination with regulatory agencies during the permitting phase of any runway development project alternatives would identify other mitigation opportunities appropriate to that alternative. Once the FAA has identified a preferred alternative, mitigation for impacts resulting from that alternative will be discussed with the USACE and other applicable regulatory agencies and documented in the Final EIS.

⁹⁸ See Appendix E, *Airfield Planning, Design, & Constructability Review*, Section E.1.5 NAVAID Facilities.

Mitigation for Impacts to Endangered and Threatened Species and Essential Fish Habitat

Potential impacts to four species of concern - smalltooth sawfish, West Indian manatee, Johnson's seagrass, and the Florida burrowing owl - have been identified with the various runway development alternatives (See Section 6.F.1, *Fish, Wildlife, and Plants*). Continued coordination with the National Marine Fisheries Service, the U.S. Fish and Wildlife Services, and the Florida Fish and Wildlife Conservation Commission will be conducted throughout the remainder of the EIS process, to identify and document mitigation requirements and opportunities.