

Memorandum of Agreement between
the South Jersey Transportation Authority and
the New Jersey Pinelands Commission
FINAL VERSION
Attachment 2



US Department
of Transportation
Federal Aviation
Administration

Cooperating Agency

US Environmental
Protection Agency

Atlantic City International Airport
Final Environmental Impact Statement
for Airport Layout Plan Approval

EXECUTIVE SUMMARY

September 2003

Acronyms

| | |
|--------|---|
| ACY | Atlantic City International Airport |
| ALP | Airport Layout Plan |
| AOC | Area of Concern |
| ASGECI | Amy S. Greene Environmental Consultants, Inc. |
| BMPs | Best Management Practices |
| DEIS | Draft Environmental Impact Statement |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| EPA | Environmental Protection Agency |
| FAA | Federal Aviation Administration |
| FEIS | Final Environmental Impact Statement |
| HEP | Habitat Evaluation Procedures |
| HUs | Habitat Units |
| ILS | Instrument Landing System |
| NEPA | National Environmental Policy Act of 1969 |
| NJANG | New Jersey Air National Guard |
| NJDEP | New Jersey Department of Environmental Protection |
| NOI | Notice of Intent |
| ROD | Record of Decision |
| SJTA | South Jersey Transportation Authority |
| USCG | United States Coast Guard |
| USDA | US Department of Agriculture |
| USFWS | US Fish & Wildlife Service |

Acknowledgments

The Federal Aviation Administration would like to acknowledge the help of several independent contractors that facilitated this work. The prime contractor is *DMJM Aviation*, a nationally-recognized airport planning and engineering firm with more than 20 years experience preparing environmental documents for airports and the FAA. In addition, *Amy S. Greene Environmental Consultants, Inc.* conducted field studies and prepared impact assessments and mitigation plans for threatened and endangered species, biotic communities, and wetlands. *Orion International Technologies* prepared technical support documents for airport noise, air quality, and secondary (induced) development. *Ruetter Engineering* provided engineering support and prepared the traffic analysis and utility assessments. *Metcalf & Eddy* conducted the hydrogeologic analysis and prepared the groundwater assessment. *P&D Aviation* updated the aviation activity forecasts. And finally, *Parsons Brinckerhoff-FG* provided additional technical assistance and facilitated agency coordination.

The FAA would also like to recognize the federal, state, regional, and local agencies that regularly attended the monthly Interdisciplinary Team meetings and/or provided assistance on regulatory and compliance-related matters. In particular, the US Department of Agriculture (USDA), US Environmental Protection Agency (EPA), US Fish & Wildlife Service (USFWS), NJ Air National Guard (NJANG), NJ Department of Environmental Protection (NJDEP), NJ Pinelands Commission, and the FAA William J. Hughes Technical Center were instrumental in providing expert opinion on issues related to the airport and the protection of its surrounding environment.

Finally, the FAA sincerely appreciates the support and cooperation of the South Jersey Transportation Authority (SJTA) and the staff at the Atlantic City International Airport (ACY) during the preparation of this document.

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Foreword

This document summarizes the Final Environmental Impact Statement (FEIS) for the proposal to further develop ACY for commercial aviation purposes. The EIS process has been conducted according to the President's Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act of 1969 (NEPA). The FAA's Order 5050.4A, *Airport Environmental Handbook*, has been used to ensure that the conduct and preparation of this FEIS complies with CEQ and NEPA requirements.

The process officially began on September 28, 2000 when the FAA published a Notice of Intent (NOI) in the Federal Register to advise the public that a Draft Environmental Impact Statement (DEIS) would be prepared and that agency and public scoping meetings were going to be held. The purpose of the scoping meetings was to determine which project-related issues would be addressed and emphasized in the DEIS and to establish the work plan to be followed. In addition to the NOI, public notices were placed in local newspapers in advance of the scoping meetings. A notice was also placed on the NJ Department of Transportation's (NJDOT) Consumer Advocacy and Public Outreach website. Fliers were posted in visible, public places such as the township municipal buildings and the ACY passenger terminal building. A *Scoping Information Package* (with invitation/notification letters) was sent to approximately 75 federal, state, and local agencies and government officials, including those agencies or persons involved earlier in the environmental assessment (EA) process.

Two key points from the scoping process set the tone for the preparation of the DEIS. First, the surrounding land uses are highly compatible with normal airport operations and, as a result, there has not been a great deal of public controversy regarding development projects at ACY. Second, there are a variety of natural resources on the property, e.g., surface and groundwater features, vegetation and wildlife (including several state- and Pinelands-listed threatened and endangered species), and wetlands; there are also a number of hazardous waste sites of varying levels of importance. Consequently, the EIS process devoted considerably more time and effort to the potential adverse effects on the natural environment than on the human environment. The environmental impact categories identified as being potentially significant during the EIS scoping process are as follows: noise, secondary (induced) impacts, air quality, water resources, biotic communities, threatened and endangered species, wetlands, hazardous waste, and cumulative impacts.

Once the DEIS was complete, it was circulated for review and comment. During this period, a public hearing was held in an open forum on October 15, 2002 to answer questions about the proposed action, its alternatives, and the environmental consequences. Agencies and the public were invited to comment on the documents and/or the merits of the project alternatives. After that, additional meetings were held **to further address** and resolve agency issues and concerns. Finally, the FAA revised the DEIS by incorporating responses to the comments received. Now that the FEIS has been issued, a Record of Decision (ROD) is expected to follow.

Of note, the FEIS also incorporates several changes that could not be addressed in the draft document. For example, a rare species of butterfly (the frosted elfin, *Collophrys [Incisalia] irus*) became a state-listed threatened species; therefore, additional habitat mapping was prepared so the potential impacts to this newly-listed species could be quantified and evaluated in greater detail. Also, the NJDEP created a new special status classification, "Species of Special Concern." These species are now addressed in the FEIS. In addition, the SJTA added aircraft holding aprons (for Runway 13-31) to the list of proposed projects. Overall, however, these are relatively minor changes that did not substantially alter the findings and conclusions presented in the DEIS.

Background

ACY has a diverse history that dates back to the mid-1940s. The airport is located ten miles northwest of Atlantic City, in Atlantic County, New Jersey. The entire property consists of approximately 5,200 acres of land within Egg Harbor, Hamilton, and Galloway Townships. This land (save for 84 acres) is owned by the FAA and operated as the William J. Hughes Technical Center, an aviation research and development facility. The SJTA owns the 84-acre parcel of land (on which the commercial passenger terminal is situated) and leases another 2,000 acres of land that comprises the airfield and future development areas. In addition to the FAA and SJTA, the NJANG and the US Coast Guard (USCG) have base operations at ACY. Thus, today, ACY is a vast, joint-use aviation facility serving government, military, and civilian aviation uses.

- **What is the history of this proposal? What previous decisions have already been made about developing ACY?**

In 1983, the FAA concluded that the Technical Center could satisfy its research and development mission without having to operate ACY or maintain the entire 5,000-plus-acre property. In effect, the Technical Center was obligated to transfer the airport to a state/local governmental unit or authority. Once established, that authority could use the Technical Center's surplus land to meet the airport's development needs (provided this development would not interfere with the mission of the Technical Center or the NJANG).

In 1992, the SJTA was created to pursue transportation-related economic development projects throughout Southern New Jersey. The SJTA immediately purchased the 84-acre passenger terminal complex from the City of Atlantic City and, over the next six years, leased some 2,000 acres of land from the Technical Center for airport operations and aviation-related development. Today, the SJTA has full managerial and operational control of the commercial and general aviation facilities as well as the airfield.

In 1993, the FAA issued a federal grant to assist the SJTA with preparing two important planning studies: 1) an airport master plan, which included an airport layout plan (ALP) and 2) an environmental assessment. The *Atlantic City International Airport Master Plan Update (1996)* identifies the facilities and improvements needed for ACY to fulfill its role not just as the primary commercial service airport in the southern New Jersey region but also as a significant component in the FAA's National Airspace System. Based on the Master Plan recommendations, the ALP depicts the existing and ultimate airport facilities and their location on the airport.

While preparing the Master Plan and the ALP, the SJTA also conducted an environmental assessment that identified and evaluated the potential adverse effects likely to occur as a result of the proposed projects – namely, the loss of habitat for state-listed threatened and endangered species. After meeting with regulatory agencies and the public about the consequences of the airport's plans, the FAA concluded that a "finding of no significant impact" (FONSI) could not be issued and that an EIS should be prepared. On this basis, the FAA conditionally approved the ALP in 1999, pending environmental review and approval of the projects addressed in this FEIS.

Purpose and Need for Action

This section of the FEIS addresses the reasons why the FAA is considering the proposed projects for approval as well as why the SJTA is proposing these particular projects.

- What is the underlying purpose and need for action?

The objective is to transform an airfield that existed primarily as a government installation for nearly 50 years into a self-sustaining commercial airport capable of serving the air transportation needs of Southern New Jersey while, at the same time, helping the SJTA resolve aviation, environmental, and socioeconomic issues within the community.

- Why is the FAA considering the proposed projects for approval?

There are two principle reasons. First, the FAA Technical Center was obligated to turn over the airport to a non-federal agency, and the SJTA was created, in large part, for that purpose. When the FAA transferred control of the airport to the SJTA, one of the conditions of the agreement was that the FAA would support the Authority's future development and operation of ACY.

Second, an existing need is not being met, and it will not be unless the proposed improvements are made. The FAA is facing a major capacity problem at nearby Newark and Philadelphia airports. These are two of the busiest and most congested airports in the country; yet, most Southern New Jersey residents and visitors use *them* because ACY does not have the facilities or airlines needed to make *it* a viable travel option. The FAA is responsible for maintaining and improving the efficiency of the aviation system; making better use of ACY would help accomplish this task.

Thus, by considering the proposed projects for approval, the FAA is supporting the SJTA's mission to develop and promote ACY for air transportation and commerce – which, in turn, advances the FAA's interest in having ACY play a more meaningful and productive role in the National Airspace System.

- Why is the SJTA proposing to undertake these particular improvements?

The SJTA needs to improve air service for travelers in Southern New Jersey. Under the current situation, the vast majority of South Jersey's residents and visitors have to rely on Newark and Philadelphia airports when they require air transportation. This is because ACY does not have sufficient terminal space, gates, and other facilities to accommodate additional airlines and, therefore, offers a limited range of flights and destinations. The proposed action would permit the SJTA to expand the airport's facilities to meet the airlines' needs, thereby creating opportunities for new air service and improving air transportation for the entire South Jersey region.

The SJTA needs to foster economic development in the South Jersey region. When South Jersey's residents and visitors use Newark and Philadelphia airports, they are subsidizing improvements and economic growth in those communities rather than in South Jersey. The proposed action would permit the SJTA to construct and operate new facilities for additional airlines and passengers, as well as for the aviation-related businesses wanting to locate at ACY. These development activities would be expected to increase employment, earnings, and spending in the local community – thus contributing to South Jersey's economy.

The SJTA needs to enhance efficiency and safety at ACY. Many of the airport's existing facilities become heavily congested during busy periods, and a major effort is necessary to correct existing deficiencies and to enhance operational safety. The proposed action would increase the capacity of the passenger terminal building, aprons, and adjunct facilities; improve air access to the airport in all weather conditions; and improve taxiway efficiency and flow.

The SJTA needs to encourage revenue-producing land uses that support aviation-oriented infrastructure. Now that the federal, state, and local governments have transferred the airport to the SJTA, the management and operation of ACY must be financially self-sufficient, which has not been possible given the limited facilities and means available to generate airport income. The proposed projects would give the SJTA the ability to establish new revenue sources by developing the airport's land for aviation-related business purposes.

If no action is taken, then there are no other foreseeable sources of new or additional income for the airport; thus, the SJTA would not be able to finance the improvements needed. Consequently, South Jersey's air service would not be improved, local jobs and spending would not be increased, and airport safety and efficiency would not be enhanced. Furthermore, given the substantial costs associated with operating and maintaining the airport's infrastructure, it is not even certain whether the SJTA would be able to balance the airport's annual operating budget and pay existing debt. The need for ACY to be self-supporting is simply a necessary component in order for the SJTA to meet its (and the FAA's) goals and objectives and to operate ACY in a safe and efficient manner.

- **What are the projects that are included as part of this FEIS?**

First, the FEIS includes projects for which the SJTA has requested the FAA take environmental action. If the FAA approves the proposed projects, they could be implemented immediately or in the foreseeable future, subject to any conditions stated in the ROD. Therefore, these proposed projects are categorized as *near-term actions ripe for decision*. They include

- Terminal Area Development
- Auxiliary Area Development
- Hotel/Conference Center
- Runway 13-31 ILS Upgrade
- Holding Aprons

Second, the Master Plan and ALP present several long-range projects which are included in this FEIS only for information purposes.¹ They are not proposed at this time because 1) the justification and/or timing for them is not clearly established, and 2) no environmental action has been requested by the SJTA. Therefore, they are categorized as *long-range projects not ripe for decision*. These long-range projects will require additional environmental analysis when they become ripe for decision (i.e., at a later date) and would only be conditionally approved by the FAA on the ALP at this time. They include

- Direct Airport Access Roadway
- Runway 4-22 Extension
- High-Speed Taxiway Exits
- Non-Aviation Development along the White Horse Pike

¹Projects that are not foreseeable are normally not included in an EIS. However, in response to agency scoping comments, long-range projects and the impacts associated with them are briefly described in this FEIS so the agencies and public may have a clear understanding of the entire airport layout development plan and the environmental consequences associated with it. No environmental action is being taken at this time for the long-range projects.

- Is the purpose and need for action a controversial issue? Did the FAA receive comments pertaining to this section of the DEIS and, if so, how did the FAA respond?

Yes, the FAA did receive several letters expressing opposing views – “for” and “against” the proposed action. Comments on the DEIS and the FAA’s responses are included in Appendix I of this FEIS.

Generally, those comments supporting the proposal stress the important role ACY plays in the community and how the improvements would enhance the airport, which is viewed as an important source for job creation and regional growth. Those comments opposing the proposal advocate that potential economic benefits should not override threatened and endangered species protection, and they maintain that the negative environmental effects are not warranted.

In addition to seriously considering *those* arguments, the FAA must also consider whether ACY has adequate facilities to accomplish the underlying purpose and need for action. The SJTA has stated throughout the planning process that the existing facilities do not accommodate existing demand, so there is no allowance for growth. To verify this, the FAA commissioned supplemental studies to ensure that the facility requirements are based upon approved FAA forecasts, and the following conclusions were made:

- Each project responds to a specific problem or deficiency
- Each project (or at least the initial construction phase) is supported by approved activity forecasts or third-party plans/proposals
- The near-term projects being considered for approval at this time are reasonable and necessary
- The overall scope and magnitude of development shown on the ALP is appropriate for planning purposes

As a result, this section of the FEIS includes additional technical information taken from the supplemental studies. It also includes new information pertaining to the purpose and need for aircraft holding aprons.

Alternatives

The *Alternatives* section is the heart of this FEIS. It considers a wide range of alternatives to achieve the project purpose and need. It also presents the environmental consequences of the reasonable alternatives in comparative form.

- What range of alternatives was considered?

The alternatives range *from* exploring various on- and off-airport locations *to* using other modes of transportation *to* taking no action at all. Some of the alternatives considered fall within the FAA or SJTA's jurisdiction, while others do not. A screening process was used to identify alternatives that would not accomplish the project objectives as well as to identify those likely to cause greater environmental harm than the proposed action. Those alternatives were dismissed from further consideration.

- What is a "preferred alternative," and why have preferred alternatives been designated?

Preferred alternatives have been designated because the FEIS is required to identify the environmentally-preferred alternatives and the FAA/SJTA's preferred alternatives.

For each project, the environmentally-preferred alternative is the build alternative that results in the least amount of habitat loss and fragmentation when compared to the other build alternatives for that same project. These alternatives are located in the least environmentally constrained areas and are most likely to meet the strict Pinelands development standards because they are designed to avoid adverse impacts and offer mitigation to offset impacts that cannot be avoided. The FAA's preferred alternative is the one depicted on the ALP and is the alternative that the FAA/SJTA proposes to implement.

For all of the near-term projects, the environmentally-preferred alternatives and the FAA/SJTA's preferred alternatives are one and the same.

Terminal Area Development

In order to accommodate existing and future passenger and airline needs, the SJTA proposes to develop new or expanded terminal area facilities.

- What are the major aspects of this proposal?

- | | |
|-------------------------------|---|
| - Terminal building and gates | Phased development of new or expanded passenger handling facilities totaling 240,000 square feet, 16 jet gates and 8 commuter gates |
| - Public parking garage | Construct a multi-level parking structure for 1,500 vehicles |
| - Rental car maintenance | Construct a vehicle service center and a surface parking lot |
| - Airline cargo | Phased development of freight storage/handling facilities totaling 106,000 square feet |
| - General aviation | Phased development of an aircraft storage hangars totaling 56,000 square feet, and additional aircraft parking |
| - Deicing apron | Phased development of an apron for three jet aircraft, and a collection and storage system for contaminated runoff |

In addition, because there are several environmental concerns associated with the Build Alternative, mitigation measures are being incorporated early on – in an effort to provide solutions to potential environmental problems. These added projects or plans would avoid, minimize, rectify, reduce, or compensate for adverse environmental impacts should the Build Alternative be implemented. The proposed mitigation measures include, but are not limited to, the following:

- Grassland Conservation and Management Plan with Environmental Commitments
- Stormwater Management Plan
- Soil Erosion and Sediment Control Plan

- **What alternatives are being considered? Were any other alternatives dismissed from further consideration; if so, why?**

Two alternatives are evaluated in the FEIS: one build alternative and the No-Action Alternative. Originally, there were five on-airport build alternatives, discussed below. Three off-airport alternatives were also considered but were dismissed early on because they would not accomplish the project objectives and/or would result in greater environmental harm.

Five different locations on the airport were identified as candidate sites for terminal area development. Four of the concepts involved the construction of an entirely new terminal complex elsewhere on the airport – three of which would require hundreds of acres of open space to be developed (including land that may not be available to the SJTA). The fourth concept required relocation of the existing NJANG alert hangars and aircraft parking apron. Therefore, these four build alternatives were dismissed as being unreasonable because they result in greater environmental harm or interfere with the mission of another stakeholder, or both.

The remaining concept is to expand the existing terminal area facilities to meet the current and projected needs of the airport (see Figure ES-1). In this case, approximately half of the expansion would occur within areas currently mapped as developed land, barren land, or abandoned pavement. Approximately 66 acres could be redeveloped for the proposed project if this alternative is selected. It was determined that expansion of the existing facilities would require the least amount of open space to be developed, thereby reducing the potential loss of grassland and forest habitat. This alternative also avoids interfering with the FAA Technical Center or NJANG facilities and/or activities.

As required by NEPA, the FEIS also considers the No-Action Alternative. In this case, if no action is taken, the proposed terminal area development would not go forward, its objectives would not be met, and the environmental impacts that would have resulted from the Build Alternative would not occur. The No-Action Alternative represents the existing condition, including existing adverse environmental impacts that might continue if this alternative is selected.

- **What are the major environmental differences between the Build and No-Action Alternatives?**

The major environmental consequences associated with the Terminal Area Development alternatives are summarized in Table ES-1. Most notably, 50 acres of grassland would be developed and 9 acres of forest would be removed. Almost all of the grassland is classified as critical habitat for two state-listed birds: the upland sandpiper and grasshopper sparrow. To compensate for this loss of critical habitat, a Grassland Conservation and Management Plan has been developed. The plan provides sufficient suitable habitat in the northwest quadrant of the airport to sustain these species and ensures there would be no net loss in habitat value.

In terms of water resources, the Build Alternative would create 43 acres of new impervious cover, thus causing additional stormwater runoff volume and increasing the potential for pollutant loading. To reduce the potential for harmful effects on water resources, stormwater management BMPs have been incorporated into the proposed project. These BMPs include on-site retention, pretreatment, and infiltration systems to control the quantity and improve the quality of the stormwater runoff. There would also be preventative measures taken, as well as continued water quality monitoring in accordance with NJDEP permit requirements. The Build Alternative also includes a remote deicing apron designed and equipped for applying deicing and anti-icing chemical agents to aircraft during snow and freezing conditions. Runoff fluids from deicing/anti-icing activities would be collected by a drainage system and disposed of, thereby reducing the volume of chemicals currently permitted to flow to the edge of pavement into ditches and swales and toward the receiving waters.

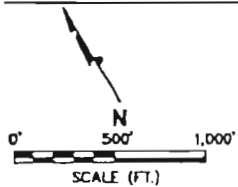
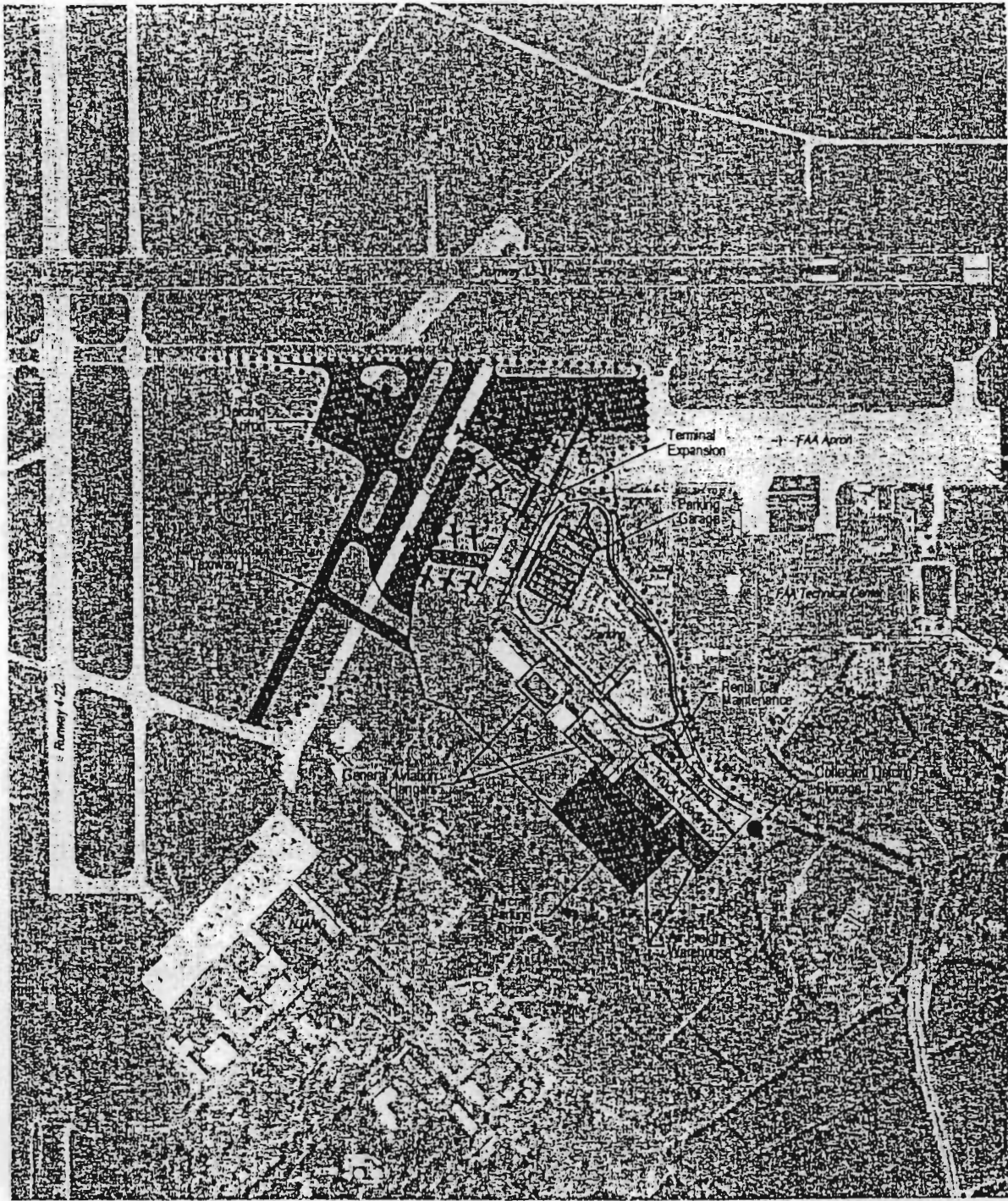
The Build Alternative would increase airport-related employment. An estimated 130 additional on-airport jobs are directly attributable to the proposed improvements (not including temporary construction employment). Furthermore, if one off-airport job is generated by every on-airport job, then the secondary (or induced) employment potential would be an additional 130 new jobs created.

The remaining environmental impacts associated with the Build Alternative (namely noise, air quality, wetlands, and hazardous waste) were determined to be manageable, or of little or no consequence.

The No-Action Alternative avoids taking open space for development purposes and preserves the existing critical habitat. However, it does not offer the potential benefits of the stormwater management system or the deicing facility associated with the Build Alternative; nor does the No-Action Alternative offer any economic benefits in terms of job creation and growth.

- Which is the FAA's preferred alternative?

The No-Action Alternative fails to meet the project's objectives. Therefore, the FAA proposes to implement the Build Alternative, with mitigation measures that reduce adverse environmental impacts to the extent practicable.



- LEGEND:**
- LIMIT OF DISTURBANCE
 - ▬▬▬▬▬ PROPOSED PAVEMENT
 - ▬▬▬▬▬ PROPOSED BUILDINGS

Figure ES-1
Terminal Area Development
Build Alternative

Source: Prepared by OIA at Anshon. Mapping provided by the South Jersey Transportation Authority based on information from the 1996 Airport Master Plan Update. Aerial photography dated September 24, 1999.

Table ES-1
Terminal Area Development Alternatives
Decision Support Matrix

| Impact Categories – Issues and/or Concerns | | No-Action Alternative | Build Alternative 1 - Expand Existing Terminal Area |
|--|--|--|---|
| Noise & Land Use | Airport Operations | Takeoffs and landings remain at current levels (no change) | Takeoffs and landings increase up to 5.4 percent annually until 2020 |
| | Residential Noise | 0 residents cumulatively affected by incompatible noise levels in 2020 | 5 residents cumulatively affected by incompatible noise levels in 2020; no mitigation is needed, but a Part 150 Noise Compatibility Plan is being prepared by the SJTA voluntarily |
| Induced Development | Employment | No new jobs created | 260 new jobs created (direct and indirect), most of which would likely be filled by existing Atlantic County residents |
| | Housing Demand | No change | No appreciable difference |
| Air Quality | Emissions Inventory of Pollutants of Concern and EPA Conformity Analysis | No impact | Additional mobile and stationary sources increase emissions of ozone precursors (VOCs and NOx); however, 2005 and 2020 cumulative ozone emissions are below federal and state standards |
| Water Resources | Impervious Cover | No change | 43 acres of new impervious cover increases stormwater runoff and the potential for pollutant loading |
| | Stormwater Management | No improvement | Stormwater infiltration BMPs control the quantity and improve the quality of storm runoff |
| | Deicing Runoff Containment | No improvement | New deicing facilities collect, store, and properly dispose of spent deicing fluids (reducing biodegradation) |
| Biotic Communities | Grassland Areas | No impact | 50 acres of grassland habitat developed; mitigation improves other grassland/shrub areas |
| | Forested Areas | No impact | 9 acres of forest are removed |
| State-Listed Species | Upland Sandpiper Critical Habitat | No impact | 34 acres of habitat lost; mitigation results in no net loss in habitat value |
| | Grasshopper Sparrow Critical Habitat | No impact | 23 acres of habitat lost; mitigation results in no net loss in habitat value |
| | Frosted Elfín Sutable Habitat | No impact | Impact negligible |
| Wetlands | Low Quality Wetlands | No impact | 1.07 acres of wetlands filled in; mitigation in accordance with NJDEP requirements |
| | High Quality Wetlands | No impact | No Impact |
| Hazardous Waste | CERCLA Hazardous Waste Sites | No impact | 2 listed sites affected; human health and environmental risks are low |
| | NJDEP Hazardous Waste Sites | No impact | 2 listed sites affected; human health and environmental risks are low |

Auxiliary Area Development

To advance the airlines' interest in establishing maintenance and cargo facilities at ACY, the SJTA proposes to begin developing an area of the airport for aviation-related light industry.

- **What are the major aspects of this proposal?**

- Airline maintenance Phased development of aircraft maintenance hangars for six jet aircraft
- Air freight warehouses Phased development of freight storage/handling facilities totaling 47,000 square feet
- Full-length parallel taxiway Construct a 75-foot wide taxiway on the west side of Runway 4-22
- Aircraft parking Phased development of aircraft parking apron and connector taxiways as necessary
- Access roadway and parking Establish point-of-access, construct a connector roadway, loading docks, and auto parking

- **What alternatives are being considered? Were any other alternatives dismissed from further consideration; if so, why?**

Three alternatives are evaluated in the FEIS: two build alternatives and the No-Action Alternative. One other build alternative was considered and dismissed because it was a much larger area than needed and would cause greater environmental harm. No other viable alternatives were identified.

Build Alternative 1 utilizes the northwest quadrant of the airport for auxiliary development (see Figure ES-2). This was the recommended concept in the Airport Master Plan, and, as such, it was identified as the SJTA's preferred alternative in the Environmental Assessment. The northwest quadrant is an ideal location from an airport planning perspective because there is enough open space to meet all the near-term facility requirements, plus there is long-range expansion potential for unanticipated growth. However, during the Environmental Assessment, it was determined that this alternative would result in substantial habitat loss and fragmentation and would severely impact several listed species. With the permit feasibility of Build Alternative 1 in doubt, another build alternative – one with fewer environmental impacts – was needed to meet the project's objectives.

Build Alternative 2 utilizes the undeveloped portion of the southwest quadrant of the airport (see Figure ES-2). It was developed by the SJTA for the sole purpose of reducing the adverse impacts associated with Build Alternative 1. In doing so, the SJTA also introduced a significant environmental protection strategy, which is to preserve the north side of Runway 13-31 as open space to be used to mitigate for this and other near-term actions. This southwest site is much smaller, which means there would be less grassland disturbance. Further, it is centrally located amidst other development (NJANG, Tilton Road, Runway 4-22), which means there would be less habitat fragmentation. ACY's near-term facility requirements can be met with this alternative; however, this smaller site is more restrictive in terms of site planning options and is not expandable like Build Alternative 1 in terms of long-range development.

The No-Action Alternative was also considered. In this case, the proposed auxiliary area development would not go forward, its objectives would not be met, and the environmental impacts resulting from the build alternatives would not occur. The No-Action Alternative essentially represents the existing condition.

• What are the major environmental differences between the two build alternatives and the No-Action Alternative?

The major environmental consequences associated with the Auxiliary Area Development alternatives are summarized in Table ES-2. By comparison, Build Alternative 2 (in the southwest area) causes far less environmental harm than Build Alternative 1 (in the northwest area). That is, Build Alternative 1 would cause greater impacts to grassland habitat on an acre-by-acre basis than would Build Alternative 2, and it would contribute to substantial fragmentation of the airfield by placing the facility in a remote location instead of concentrating development to the south of Runway 13-31. Even with Build Alternative 2, however, adverse effects cannot be avoided if the project objectives are to be met, so those effects would be mitigated to the extent practicable.

More specifically, Build Alternative 1 (northwest quadrant) requires 70 acres of grassland to be developed compared with 39 acres for Build Alternative 2 (southwest quadrant). However, the added impacts are not limited solely to the size of the affected area; the impacts would be greater in terms of habitat value too. This is because the northwest quadrant of the airport is entirely undeveloped and is one of the largest contiguous grassland/shrub complexes on the airfield. The diverse cover type in the northwest quadrant provides optimum nesting, breeding, and foraging habitat for grassland birds; foraging habitat for their predators; and suitable habitat for butterflies and moths. By comparison, the southwest quadrant is substantially developed, and the remaining vacant area is dominated by a mixed grass cover. Thus, the overall habitat value of the Build Alternative 2 site is less than optimal due to the existing development and fragmentation that has already occurred in this area. The fact that Build Alternative 2 requires five acres of forest to be cleared is not a major concern because that area was determined to have no habitat value for threatened and endangered species and forest interior birds.

Because most of the grassland affected by the two proposed build alternatives has been designated as critical habitat for state-listed and Pinelands-listed threatened and endangered species (namely the upland sandpiper and grasshopper sparrow), the adverse impacts to threatened and endangered species are significant with both build alternatives.

Build Alternative 1 (which includes the Runway 4-22 parallel taxiway) results in the loss of 19 acres of upland sandpiper critical habitat and 51 acres of grasshopper sparrow critical habitat. Furthermore, the extensive fragmentation caused by the proposed buildings, aprons, taxiways, and the access road would render the remaining habitat less suitable for both species. A population of narrow-leaved vervain (a state-listed plant) would be partially eliminated, and the frosted elfin (a state-listed butterfly) would also be adversely affected.

In contrast, Build Alternative 2 (which also includes the Runway 4-22 parallel taxiway) results in the loss of 40 acres of upland sandpiper critical habitat and 34 acres of grasshopper sparrow critical habitat. Although these impacts are still substantial on a per-acre basis, the location and design of this alternative minimizes the adverse effects of fragmentation by avoiding development in the more valuable northwest quadrant. Adverse impacts to the frosted elfin are unlikely with this alternative, and the narrow-leaved vervain would be avoided.

However, the most important difference between the two build alternatives is that the loss of this critical grassland habitat can be mitigated with Alternative 2 but not with Alternative 1. Alternative 1 conflicts with the proposed *Grassland Conservation and Management Plan*. According to that plan, the northwest quadrant of the airport is the only area (available to the SJTA) that is capable of providing sufficient, suitable grassland habitat for the two state-listed bird species adversely affected by the proposal. This means that if Build Alternative 1 were to be selected,

then the northwest area would be used for auxiliary development rather than for mitigation. Thus, a different mitigation plan would have to be prepared – and a viable alternative may not exist.²

In terms of water resources, Build Alternative 1 results in 65 acres of new impervious cover compared with 35 acres for Build Alternative 2. The difference is the southwest site is more compact, the access road is shorter, and there is less need for taxiway development. Although it was determined that both sites could be designed and built to comply with state and local stormwater management requirements, the magnitude of the facilities needed to meet these requirements are proportionately less with Build Alternative 2.

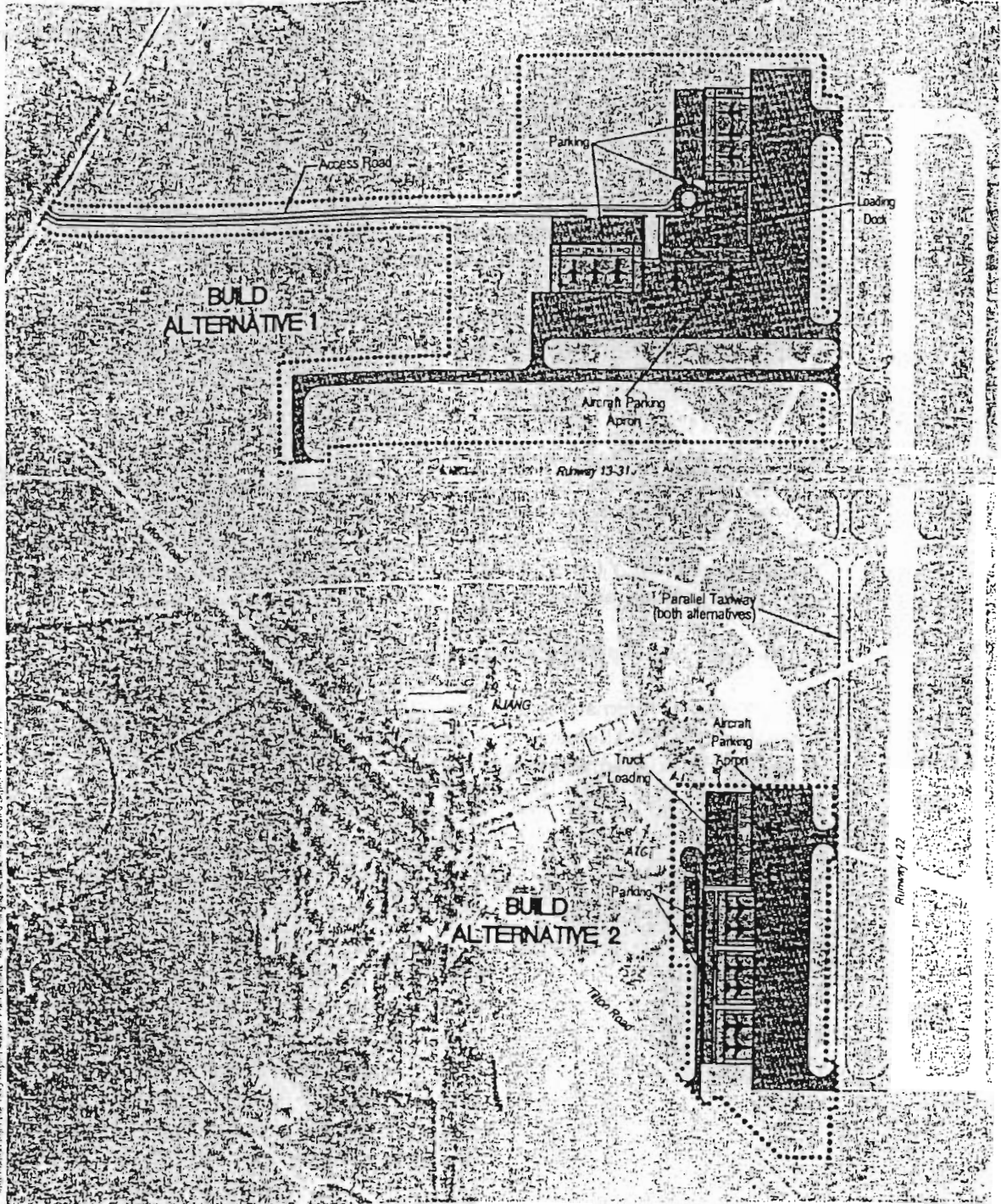
The remaining environmental impacts associated with the build alternatives (namely noise, air quality, wetlands, and hazardous waste) were determined to be manageable, or of little or no consequence. Both build alternatives offer the opportunity for near-term increases in employment.

The No-Action Alternative avoids using open space for development purposes and preserves existing critical grassland habitat, thereby avoiding adverse impacts to the natural environment. However, the No-Action Alternative does not result in any positive effects to the human environment because there would be no job creation, regional economic growth, or added land-use revenues for ACY (revenue that is critical to the SJTA's continued maintenance, operation, and overall enhancement of the airport).

- **Which is the FAA's preferred alternative?**

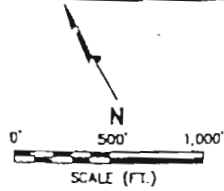
The No-Action Alternative fails to meet the project's objectives. Therefore, the preferred alternative is Build Alternative 2, with mitigation measures to reduce adverse environmental impacts to the extent practicable.

²Other on-site and off-site locations for grassland mitigation were examined, but a viable alternative could not be identified.



Source: Prepared by DTM/JM Aviation. Mapping provided by the South Jersey Transportation Authority to assist in information from the 1985 Airport Master Plan Update. Aerial photograph base map is dated September 24, 1989.

NOTE: Full build-out of ALP projects shown for analysis and descriptive purposes. The Proposed Parallel Taxiway is required to either build Alternative 1 or Alternative 2.



- LEGEND**
- LIMIT OF DISTURBANCE
 - - - - AIRPORT PROPERTY BOUNDARY
 - ▨ PROPOSED PAVEMENT
 - ▭ PROPOSED BUILDINGS

Figure ES-2
Auxiliary Area Development
Build Alternatives 1 & 2

**Table ES-2
Auxiliary Area Development Alternatives
Decision Support Matrix**

| Impact Categories – Issues and/or Concerns | | No-Action Alternative | Build Alternative 1 - Northwest Quadrant | Build Alternative 2 - Southwest Quadrant |
|--|--------------------------------------|-----------------------|--|---|
| Induced Development | Employment | No impact | 190 new jobs created (direct and indirect); potential for expansion | 190 new jobs created (direct and indirect); no potential for expansion |
| | Housing Demand | No impact | No appreciable difference | No appreciable difference |
| Water Resources | Impervious Cover | No change | 65 acres of new impervious cover increases stormwater runoff and the potential for pollutant loading | 35 acres of new impervious cover increases stormwater runoff and the potential for pollutant loading |
| | Stormwater Management | No change | Stormwater BMPs effectively control the quantity and quality of stormwater runoff | Stormwater BMPs effectively control the quantity and quality of stormwater runoff |
| Biotic Communities | Grassland Areas | No impact | 70 acres of grassland developed; mitigation may not be feasible | 39 acres of grassland developed; mitigation by improving other grassland areas |
| | Forested Areas | No impact | 0.1 acre of forest is removed | 4 acres of forest are removed |
| State-Listed Species | Upland Sandpiper Critical Habitat | No impact | 19 acres of habitat lost; extensive fragmentation of habitat; mitigation may not be possible | 40 acres of habitat lost; limited fragmentation of habitat; mitigation results in no net loss in habitat value |
| | Grasshopper Sparrow Critical Habitat | No impact | 51 acres of habitat lost; extensive fragmentation of habitat; mitigation may not be possible | 34 acres of habitat lost; limited fragmentation of habitat; mitigation results in no net loss in habitat value |
| | Frosted Elfyn Suitable Habitat | No impact | 56 acres of suitable habitat lost and 2 documented sightings disturbed | No impact from auxiliary development, but 4 acres of suitable habitat removed for the parallel taxiway |
| | Narrow-leaved Vervain | No impact | 0.2 acres of local population eliminated | No impact |
| Wetlands | Low Quality Wetlands | No impact | 1.52 acres of wetlands filled in; mitigation in accordance with NJDEP requirements | No impact from auxiliary development, but 0.24 acres of wetlands filled in for the parallel taxiway; mitigation in accordance with NJDEP requirements |
| | High Quality Wetlands | No impact | No impact | No impact |
| Hazardous Waste | CERCLA Hazardous Waste Sites | No impact | One listed site affected by development but is avoided until CERCLA-approved for use | One listed site affected by mitigation but is avoided until CERCLA-approved for use |
| | NJDEP Hazardous Waste Sites | No impact | No impact | No impact |

NOTE: The quantities associated with Build Alternatives 1 and 2 include the parallel taxiway for Runway 4-22, a connected action.

Hotel/Conference Center

In response to the demand for on-site lodging and meeting facilities, the SJTA proposes to allow a third-party developer to construct a hotel/conference center on airport property.

- What are the major aspects of this proposal?

- One three-story building for 150 suites
- Lobby area and amenities
- Swimming pool and outbuildings
- Auto parking

- What alternatives are being considered?

Three alternatives are evaluated in the FEIS: two build alternatives and the No-Action Alternative. Build Alternative 1 places the facility along Amelia Earhart Boulevard, while Build Alternative 2 places the facility at the Airport Circle intersection (see Figure ES-3). No other viable build alternatives were identified. If no action is taken, then the hotel/conference center would not be constructed on airport property.

- What are the major environmental differences between the two build alternatives and the No-Action Alternative?

The major environmental consequences associated with the Hotel/Conference Center alternatives are summarized in Table ES-3. Most important are the potential adverse effects that the build alternatives would have on upland forests, forest interior species, and habitat for the state-listed Cooper's hawk and barred owl.

Build Alternative 1, along Amelia Earhart Boulevard, was modified between the draft and final EIS in an attempt to minimize adverse environmental consequences to forested areas. The new, modified alternative requires 8.3 acres of pine-oak forest to be cleared and 1.0 acre of internal forest roads to be redeveloped. In total, there would be a direct loss of 9.3 acres of Cooper's hawk nesting territory.

Build Alternative 2, at the Airport Circle intersection, requires 13.9 acres of pine-oak forest to be removed from two NJDEP-designated protected habitat zones – one for the Cooper's hawk and the other for the barred owl. Although these protected areas do not presently contain nest sites, they may still provide suitable breeding habitat, and the NJDEP recommends that such areas be set aside for habitat protection. However, the results of supplemental Cooper's hawk and barred owl surveys and field investigations determined that Cooper's hawk do not nest in the vicinity of the project and the site does not contain nesting or foraging habitat for the barred owl.

In terms of other impacts, both build alternatives increase impervious cover by approximately three acres; therefore, they each include stormwater management BMPs to control the quantity and quality of stormwater runoff. The potential adverse effects upon wetlands would be avoided through stormwater BMPs. Build Alternative 1 is located near two hazardous waste sites with ongoing remedial activities, but these sites could be avoided. The potential for traffic-related effects was also considered, and in that respect, Build Alternative 1 would be preferable because this location is not likely to lower the level of service at the Airport Circle intersection (as Build Alternative 2 likely would).

The No-Action Alternative avoids clearing wooded areas for development and preserves existing forest habitat areas; it avoids the potential for adverse impacts to wetlands, water resources, hazardous waste sites, and traffic on the local roadways. However, adverse environmental impacts cannot be avoided if the project objectives are to be met. The No-Action Alternative does not result in a positive effect on the human environment because the proposed hotel/conference center would generate approximately 60 jobs for the community and revenue for the airport – while providing a much needed service to the airlines, passengers, and the FAA Technical Center.

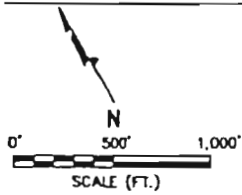
- Which is the FAA's preferred alternative?

The No-Action Alternative fails to meet the project objectives. Build Alternative 2 is considered to be the environmentally preferable alternative because it avoids a direct loss of Cooper's hawk nesting territory. In response to agency concerns with respect to the DEIS, the FAA and SJTA have now selected Build Alternative 2 (rather than Build Alternative 1 as stated in the DEIS) as their preferred alternative as well, with mitigation measures to reduce adverse environmental impacts to the extent practicable.

Figure 2.3
The Conference Center
Build Alternative 2



Source: Prepared by DUMJ Aviation. Mapping provided by the South Jersey Transportation Authority. Aerial photographic base map is dated September 24, 1999.



LEGEND

- LIMIT OF DISTURBANCE
- - - - AIRPORT PROPERTY BOUNDARY

Figure ES-3
Hotel/Conference Center
Build Alternatives 1 & 2

Table ES-3
 Hotel / Conference Center Alternatives
 Decision Support Matrix

| Impact Categories – Issues and/or Concerns | | No-Action Alternative | Buld Alternative 1 along Amelia Earhart Blvd | Buld Alternative 2 at Airport Circle |
|--|------------------------------|-----------------------|--|--|
| Induced Development | Employment | No new jobs created | 60 new jobs created | 60 new jobs created |
| | Housing Demand | No change | No appreciable change | No appreciable change |
| Water Resources | Impervious Cover | No change | 3 acres of new impervious cover increases stormwater runoff and the potential for pollutant loading | 3 acres of new impervious cover increases stormwater runoff and the potential for pollutant loading |
| | Stormwater Management | No change | Stormwater BMPs effectively control the quantity and quality of stormwater runoff | Stormwater BMPs effectively control the quantity and quality of stormwater runoff |
| Biotic Communities | Grassland Areas | No impact | No impact | No impact |
| | Forested Areas | No impact | 8.3 acres of pine-oak forest are removed 1.0 acres of internal forest roads would be developed | 13.9 acres of pine-oak forest are removed |
| State-Listed Species | Cooper's Hawk Habitat | No impact | 9.3 acres of Cooper's hawk nesting territory lost; proposed mitigation would restrict construction activities during breeding season | 13.9 acres of NJDEP-protected habitat lost; surveys determined that the species does not nest in the vicinity; mitigation would restrict construction activities during breeding season |
| | Barred Owl Habitat | No impact | No impact | 13.9 acres of NJDEP-protected habitat lost; surveys determined that nesting and foraging habitat is not present; proposed mitigation would restrict construction activities during breeding season |
| Wetlands | Low Quality Wetlands | No impact | No impact | No impact |
| | High Quality Wetlands | No impact | No impact | No impact |
| Hazardous Waste | CERCLA Hazardous Waste Sites | No impact | In proximity of 2 listed sites; adverse impacts are not anticipated | No impact |
| | NJDEP Hazardous Waste Sites | No impact | No impact | No impact |

³The nesting territory includes one acre of dirt roads.

Runway 13-31 ILS Upgrade

To improve the utility of Runway 13-31, the SJTA proposes to install electronic navigational aids on Runway 31. This instrument landing system, or ILS, would increase airfield efficiency and operational safety when pilots have to land on Runway 31 during inclement weather.

- What are the major aspects of this proposal?

- Localizer antenna
- Glide slope antenna
- Medium intensity approach light system (MALSR)
- Marker beacons

- What alternatives are being considered?

Three alternatives are evaluated in the FEIS: two build alternatives and the No-Action Alternative. Build Alternative 1 would install a new Category I ILS on Runway 31. Build Alternative 2 would move the existing Category I ILS from Runway 13 to Runway 31; then a new, upgraded Category II ILS would be installed on Runway 13. If no action is taken, then an ILS would not be installed on either runway end. No other alternatives were identified.

- What are the major environmental differences between the two build alternatives and the No-Action Alternative?

The major environmental consequences associated with the Runway 13-31 ILS Upgrade alternatives are summarized in Table ES-4. The potential impacts associated with the two build alternatives are virtually the same. Build Alternative 2, which, by definition, includes Build Alternative 1, increases the direct loss of biotic communities, but the total is just slightly greater than one acre. The same is true for loss of habitat for the upland sandpiper and grasshopper sparrow (the loss of habitat is approximately one-third acre and would be mitigated under the *Grassland Conservation and Management Plan*). Both build alternatives would result in a minor loss of suitable habitat for the frosted elfin; however, restoration of 0.8 acres of forest to be removed would benefit the species by providing a net increase in suitable habitat. Both alternatives would result in the removal of 0.8 acres of forest designated as protected habitat for the barred owl and Cooper's hawk by the NJDEP. Barred owl would not be adversely affected because foraging and nesting habitat is not present in the project area. The Cooper's hawk is not documented to breed in the vicinity of the project but may use the area for foraging, thus the removal of 0.8 acre of forest would not adversely affect the Cooper's hawk. Both build alternatives would increase light emissions, but there are no incompatible land uses in the area.

Under the No-Action Alternative, the build alternative would not be implemented and the project objectives would not be met. An ILS would not be installed on Runway 31, and the airport would have to continue to rely solely on the existing Runway 13 ILS.

- Which is the FAA's preferred alternative?

The No-Action Alternative fails to meet the project objectives. The preferred alternative is Build Alternative 2.

**Table ES-4
Runway 13-31 ILS Upgrade Alternatives
Decision Support Matrix**

| Impact Categories – Issues and/or Concerns | | No-Action Alternative | Build Alternative 1 Install an ILS on RW31 | Build Alternative 2 Upgrade ILS on RW13 and Install an ILS on RW31 |
|---|--|-----------------------|---|--|
| Biotic Communities | Grassland Areas | No impact | 0.3 acre of grassland/shrub habitat removed; minimal impact on grassland species | 0.4 acre of grassland/shrub habitat removed; minimal impact on grassland species |
| | Forested Areas | No impact | 0.8 acre of pine-oak forest habitat is removed; minimal impact on forest interior species | 0.8 acre of pine-oak forest habitat is removed; minimal impact on forest interior species |
| State-Listed Species | Upland Sandpiper Critical Habitat | No impact | 0.28 acre of habitat lost; mitigation results in no net loss in habitat value | 0.37 acre of habitat lost; mitigation results in no net loss in habitat value |
| | Grasshopper Sparrow Critical Habitat | No impact | 0.06 acre of habitat lost; mitigation results in no net loss in habitat value | 0.19 acre of habitat lost; mitigation results in no net loss in habitat value |
| | Frosted Elfyn Habitat | Suitable No impact | 0.007 acre of suitable habitat lost; restoration of 0.8 acres of removed forest results in a net increase in suitable habitat | 0.007 acre of suitable habitat lost; restoration of 0.8 acres of removed forest results in a net increase in suitable habitat |
| | Cooper's Hawk and Barred Owl Habitat | No impact | 0.08 acre of NJDEP-designated protected habitat would be lost; barred owl nesting and foraging habitat not present Impacts to Cooper's hawk unlikely | 0.8 acre of NJDEP-designated protected habitat would be lost; barred owl nesting and foraging habitat not present Impacts to Cooper's hawk unlikely |
| Light Emissions | Directional Lighting | No change | Approach lights would be re-introduced on the east end of the runway | Approach lights would be re-introduced on the east end of the runway; existing approach lights would be intensified on the west end of the runway |
| | Incompatible Land Uses | No impact | There are no incompatible land uses in the affected area | There are no incompatible land uses in the affected area |

Holding Aprons

To increase taxiway efficiency and operational safety, the SJTA proposes to construct holding aprons (or arm/de-arm pads) at each end of Runway 13-31. These holding aprons would separate military aircraft when arm/de-arm procedures are being performed so that bypass operations can occur.

- **What are the major aspects of this proposal?**

- Paved apron areas at each end of Runway 13-31 sufficiently sized and constructed to accommodate four (F-16) aircraft parking positions and a taxilane around them

- **What alternatives are being considered? Were any other alternatives dismissed from further consideration; if so, why?**

Two alternatives are evaluated in the FEIS: the No-Action Alternative and the Build Alternative. The Build Alternative would extend the existing run-up pads at each end of Runway 13-31 so they function as holding aprons instead (See Figure ES-4). If no action is taken, these holding aprons would not be constructed.

The FAA and SJTA relied on the NJANG to identify those alternatives that offered the *safest* military and civilian operations possible and with the least potential disruption to civilian air traffic. While the NJANG considered several other alternatives (in both central and decentral locations), they only recommended one for evaluation in the FEIS, finding the others to be less safe than the preferred alternative.

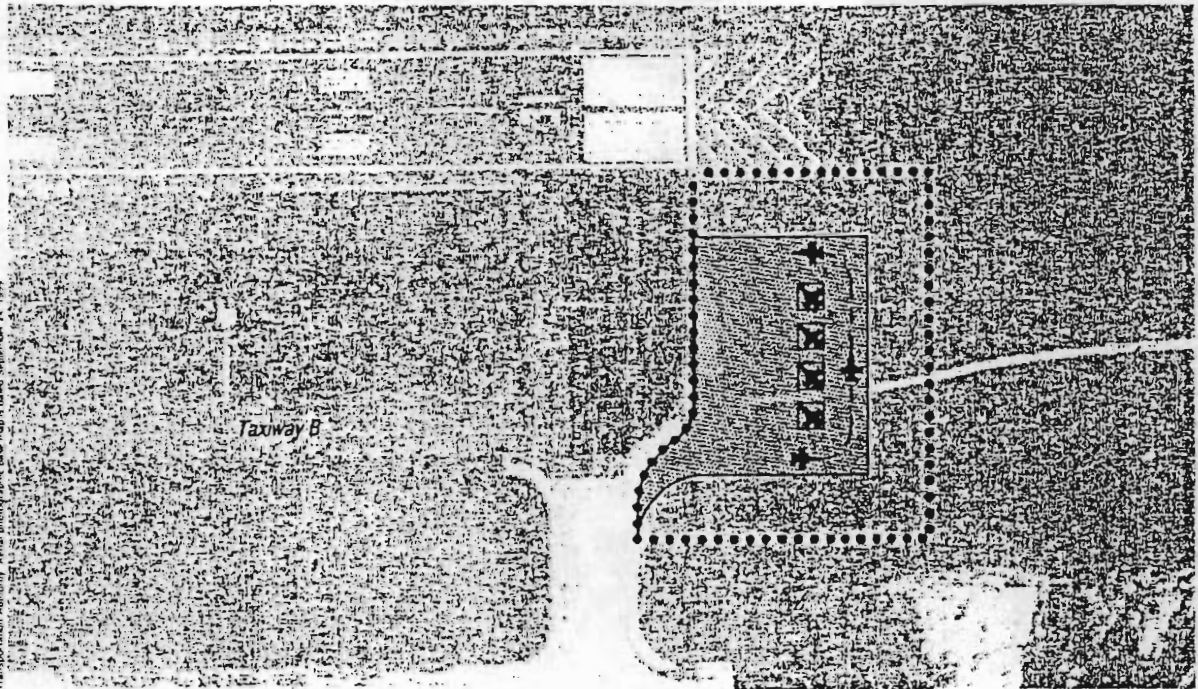
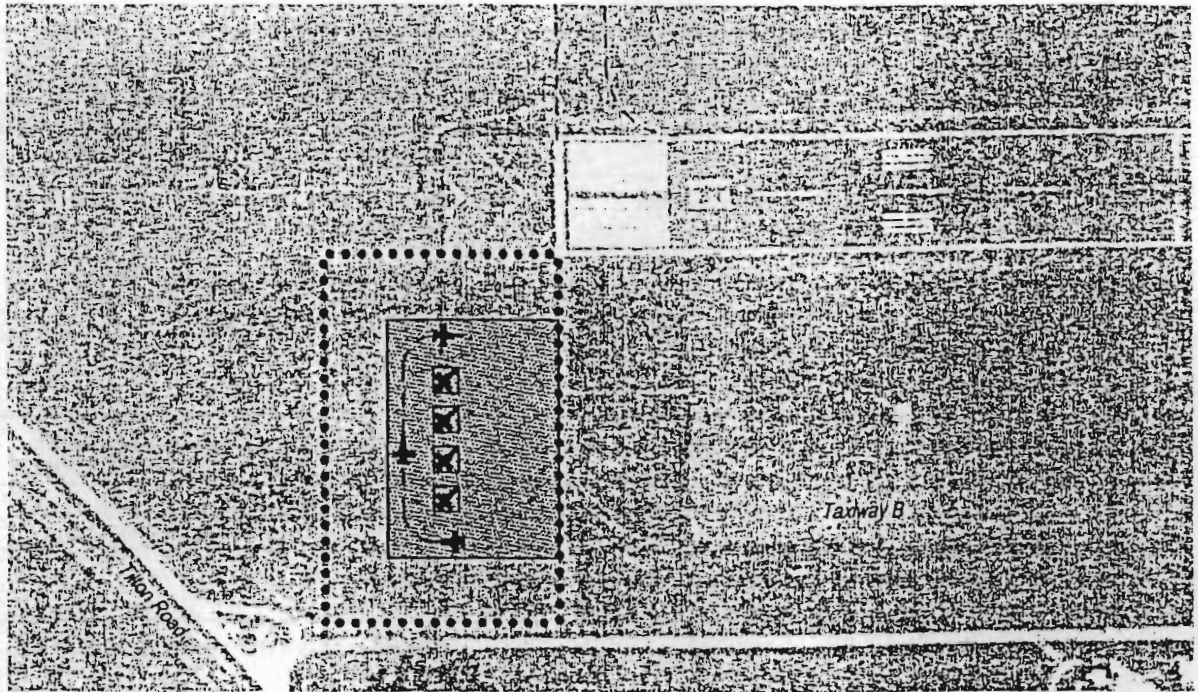
- **What are the major environmental differences between the Build and No-Action Alternatives?**

The major environmental consequences associated with the construction of holding aprons at each end of Runway 13-31 are summarized in Table ES-5. The Build Alternative would result in the removal of 4.36 acres of critical grassland habitat for the upland sandpiper and grasshopper sparrow. The loss of critical habitat would be offset by the *Grassland Conservation and Management Plan*. There would be no effect on the frosted elfin because suitable habitat for the species is not present in the project area. Less than one-tenth of an acre of wetland (ditch) would be filled as a result of grading activities. Wetland mitigation would be performed as necessary.

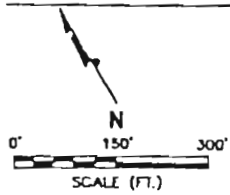
Under the No-Action Alternative, holding aprons would not be constructed at each end of Runway 13-31, and the project objectives would not be met. Civilian aircraft would continue to encounter delays while waiting for military aircraft to complete arm/de-arm procedures and quick-checks. In addition, these military procedures would continue to occur in close proximity to civilian aircraft.

- **Which is the FAA's preferred alternative?**

The No-Action Alternative fails to meet the project objectives. The preferred alternative is the Build Alternative.



Source: Prepared by DCA Aviation. Mapping provided by the South Jersey Transportation Authority. Aerial photographic base map is dated September 24, 1999.



LEGEND

- • • • • LIMIT OF DISTURBANCE
- ▨ PROPOSED PAVEMENT

Figure ES-4
Holding Apron
Build Alternative

Table ES-5
Holding Apron Alternatives
Decision Support Matrix

| Impact Categories – Issues and/or Concerns | | No-Action Alternative | Build Alternative 1 - Expand Run-up Pads at Each End of Runway 13-31 |
|---|---|-----------------------|--|
| Water Resources | Impervious Cover | No change | 4.6 acres of new impervious cover; the quality/quantity of stormwater runoff would not change appreciably |
| | Stormwater Management | No improvement | Stormwater BMPs control the quantity and improve the quality of stormwater runoff |
| Biotic Communities | Grassland Areas | No impact | 4.36 acres of grassland developed; grassland conservation and management provides similar grassland habitat to that lost |
| | Forested Areas | No impact | No impact |
| State-Listed Species | Upland Sandpiper Critical Habitat | No impact | 4.8 acres of habitat lost; grassland conservation and management results in no net loss in habitat value |
| | Grasshopper Sparrow Critical Habitat | No impact | 3.3 acres of habitat lost; grassland conservation and management results in no net loss in habitat value |
| | Frosted Elfin Suitable Habitat | No impact | No impact |
| Wetlands | Low Quality Wetlands | No impact | 0.8 acres of isolated (ditch) wetland at the 13 end of Runway 13-31 |
| | High Quality Wetlands | No impact | No impact |

Other Long-Range Projects (Direct Airport Access Roadway, Runway 4-22 Extension, High-Speed Taxiway Exits, Non-Aviation Development along the White Horse Pike)

Although there are four other long-range projects depicted on the ALP and discussed in the FEIS, no action is being taken on them at this time. They are presented for information purposes only, at the request of agencies wanting a clear understanding of the future development of the airport – beyond just the near-term projects. Further environmental analysis in accordance with NEPA will be required before any approval action can be taken on these projects.

- **What are the major aspects of the Direct Access Roadway project? What are the potential environmental issues or concerns?**

For long-range planning purposes, the ALP depicts a new interchange west of Exit 9 (on the Atlantic City Expressway) and a new road leading directly into the terminal area. The direct access roadway could reduce traffic volumes on local roadways, but constructing it could also adversely affect several environmental resources. The affected environment includes: surface water, biotic communities, threatened and endangered species, wetlands, floodplains, and hazardous waste sites. The curved alignment of the future roadway reflects the planner's attempt to avoid these resources, but that may not be possible if the project's objectives are to be accomplished.

- **What are the major aspects of the Runway 4-22 Extension project? Are the environmental consequences potentially significant?**

For long-range planning purposes, the ALP depicts Runway 4-22 at a full length of 8,000 feet. The extension could increase the safety and the utility of the runway, but constructing it could also adversely affect several environmental resources. The affected environment includes: surface water, biotic communities, threatened and endangered species, wetlands, floodplains, and hazardous waste sites. The FEIS identifies three build alternatives capable of accomplishing the project's objectives. Build Alternative 2, which extends the runway 1,578 feet to the north and 278 feet to the south, is the build alternative most likely to minimize adverse impacts as compared with the other two build alternatives.

- **What are the major aspects of the High-Speed Taxiway Exits project? Are the environmental consequences potentially significant?**

For long-range planning purposes, the ALP depicts acute-angled taxiways (also known as high-speed taxiway exits) along Runway 13-31. Constructing the taxiway exits could improve the operational efficiency and safety of the runway. This project would be relatively small, and the environmental impacts would likely be manageable because the affected environment includes only small amounts of grassland between the runway and the taxiway. The location of high-speed taxiway exits are fixed by function, so any alternatives would be limited to design variations and mitigation techniques.

- **What are the major aspects of Non-Aviation Development along the White Horse Pike? Are the environmental consequences potentially significant?**

For long-range planning purposes, the ALP depicts an area on the north side of the airport that the SJTA could use for non-aviation development. Using this area for light industrial or commercial use would generate additional revenue for the airport, but the development could also encroach upon several environmental resources. The affected environment includes: surface water, biotic communities, habitat for threatened and endangered species, wetlands,

floodplains, and hazardous waste sites. Depending on the location and size of the site needed to accommodate a future development proposal, those resources may be able to be avoided.

Environmental Consequences

This section summarizes the potential impacts, both adverse and beneficial, to the human and natural environment. Where appropriate, it also describes the mitigation measures available to minimize or avoid adverse impacts resulting from the alternatives considered.

Aircraft Noise

According to FAA policy, ACY generates sufficient daily jet aircraft operations to warrant consideration of noise as part of any development proposal. Therefore, aircraft noise was identified as a significant scoping issue to be addressed in the FEIS.

- **In general, is airport-related noise in the project study area expected to increase or decrease over time, and what changes are expected?**

The analysis indicates that noise levels in the vicinity of the airport are expected to diminish over the next ten years whether the proposed action is implemented or not. The anticipated noise reduction is due to the airline industry's ongoing replacement of older, noisier airplanes with newer, quieter ones. For this reason, even assuming the worst-case noise scenario, there would still be a substantial reduction in land area and population exposed to incompatible noise levels, as compared with existing conditions.

- **Are there near-term projects that would directly affect noise exposure in the vicinity of the airport?**

No. There are no proposed airfield or airspace modifications that would change the airport's operating characteristics in a manner that would introduce aircraft overflights (and noise) to a previously unaffected area. Thus, the "shape" of the noise contours would not change.

- **If there are no projects that would affect the noise contours, then on what basis was the noise analysis prepared?**

Taking into account the expected benefits of quieter commercial aircraft operations, the predicted noise levels associated with the future "Build" and "No-Build" conditions were compared. The assessment is based on the projected types of aircraft and aircraft operations. It was assumed that if no action is taken, aircraft operations would remain unchanged. Conversely, if a build alternative is selected, then it was assumed that aircraft operations would increase. On this basis, future noise contours were prepared for 2005, 2010, and 2020 for the Build and the No-Build conditions.

- **What did the noise analysis conclude? Is there a difference between the "Build" and "No-Build" alternatives? Are there proposed mitigation measures?**

If no action is taken, then no residents would be affected by incompatible noise levels in 2020. In contrast, five residents would be affected if a build alternative is selected. Therefore, implementation of the proposed action would result in five residents still being affected by incompatible noise levels in 2020, which is far less than the 26 residents that are affected by the same noise level today.

Noise mitigation measures are not proposed as part of this FEIS. However, the SJTA is voluntarily preparing a Noise Compatibility Plan for ACY. That plan will identify alternative methods to reduce the existing adverse effects of airport-related noise on incompatible land uses.

- Are there possible noise impacts associated with the long-range projects?

Three concepts for extending the secondary runway (Runway 4-22) are discussed in the FEIS. The noise analysis indicates that, regardless of the alternative, incompatible noise levels would not extend beyond airport property in either direction. Even so, no action is being taken on this project at this time.

Compatible Land Use

The proposed projects would occur on existing FAA Technical Center property and, for the most part, on land leased to the SJTA for airport development. Therefore, land use compatibility was not identified as a significant scoping issue.

- Are land uses on or around ACY likely to change as a result of either the near-term or long-range projects?

No major land use ramifications have been identified, on or off the airport. There would be no land acquisition, no business or residence relocations, and no need for zoning changes. The proposed projects are consistent with the applicable land use and transportation plans; except for the Pinelands Comprehensive Management Plan, for which a consistency determination is pending their review of the FEIS.

Furthermore, the proposed projects would not interfere with the missions of the FAA Technical Center, the NJANG, or the USCG. The FAA Technical Center's Master Plan Siting Board would continue to be responsible for resolving minor issues such as lease amendments, utility easements, etc.

Social Impacts

Although social impacts were not identified as a significant scoping issue, employment and environmental justice were two issues identified for further examination.

- Would the near-term and long-range projects cause employment to change?

The proposed action would generate new job opportunities for area residents, thereby increasing employment in the community. Approximately 550 new jobs would be directly and indirectly created (295 on-airport and 250 off-airport) by 2010. Nevertheless, this is only approximately one percent of Atlantic County's total employment, so the local (un)employment rates would not change appreciably as a result.

- In terms of environmental justice, would the projects disproportionately affect minority or low-income populations?

There would be no negative off-airport impacts to any individuals – regardless of their race or income status.

- Would the projects change the surrounding human and/or physical environment and the relationship of people with that environment?

There would be no relocation of residences or businesses, no division of established communities, and no alterations to surface transportation patterns. Regional and local planning agencies were consulted about planned development in the area, and no potential conflicts were identified.

Secondary (Induced) Development

The potential for airport development to cause unanticipated growth was identified as a significant issue. More specifically, the concern was whether or not the land demand for housing would increase appreciably as a result of the proposed action, and if so, whether the existing "regional growth area" would be able to accommodate that increase.

- Would the near-term or long-range projects stimulate housing development in the surrounding area?

In terms of demand, the analysis shows that it would be unlikely for Atlantic County to experience exponential growth as a result of the proposed action. In the case of ACY, the airport is a trailing indicator of the local economy, not a leading one. The analysis indicates that airport activity is not a major driver of land and resource demand. In terms of supply, Atlantic County housing data reveals that the current vacancy rate is nearly twice the New Jersey average, indicating a current housing surplus. Further, much of Atlantic County is designated as a Pinelands Regional Growth Area, meaning that development is allowed and encouraged because this area is experiencing development pressure and is capable of accommodating reasonable growth. It is estimated that there would be slightly more than 1,000 new hires in total (550 airport jobs associated with the proposed action and another 500 jobs associated with the FAA Technical Center) over a five-to-ten-year period. Even if every one of these positions were to be filled by someone relocating to Atlantic County, the projected increase is well within the Pinelands Commission's established growth rates for the County.

Air Quality

ACY is located in an area that does not meet federal or state air quality standards for ozone – in other words, this area is in "nonattainment" for ozone. Under FAA policy, airport actions that would permit an increase in aircraft or vehicle operations in a nonattainment area are considered potentially significant until analysis indicates otherwise. Therefore, air quality was identified as a significant scoping issue to be addressed in the FEIS.

- Would the near-term or long-range projects increase emissions of pollutants of concern; and, if so, would the increase exceed air quality standards?

Aircraft operations, motor vehicles, ground support equipment, and other facility improvements associated with the proposed action (including construction) would increase emissions of VOCs (volatile organic compounds) and NO_x (oxides of nitrogen) – the two pollutants that combine to form ozone in the atmosphere.

The EPA's conformity review process was used to determine whether threshold emissions levels would be exceeded by the proposed action, triggering the need for further air quality analysis that incorporates mitigation techniques. Threshold emissions levels are based on the proposed action's net annual emissions (that is, build emissions levels minus the no-build emissions levels). For evaluation purposes, the build alternative is based on the high-growth forecast for

passenger enplanements and aircraft operations (this represents the air quality worst-case scenario). The results of the analysis indicate that the projected increases in VOC and NO_x emissions are less than half of the threshold emissions levels for these two pollutants, and they would contribute less than one percent to the region's emissions inventory. Therefore, EPA's general conformity requirements would not apply to the proposed action, and no further analysis is needed.

Water Resources

Surface and groundwater features in the project study area contribute to Atlantic City's drinking water supply, and the surface waters serve an important habitat function as well. Runoff from airport activities could have harmful effects on these water resources unless managed correctly. Therefore, the protection of water resources was identified as a significant scoping issue to be addressed in the FEIS.

- **What are the potential effects that the near-term and long-range projects would have on surface water and groundwater resources?**

If the proposed action is implemented, additional buildings and pavements would be constructed and used for commercial and industrial-type land uses.⁴ In total, the preferred alternatives would increase impervious cover by approximately 86 acres (an increase of 2 percent – that is, from 8 to 10 percent of the 5,000-acre study area). As impervious cover increases, groundwater recharge is reduced because less precipitation is able to infiltrate the soils to the groundwater table below. As the volume of stormwater runoff increases, so does the risk of flooding.

Further, as runoff increases, so does the potential for stormwater pollution. Potential pollution sources include erosion and sedimentation from construction, wastes from fueling and cleaning operations, fuel and oil spills, wastes from chemicals used in snow and ice removal, and fertilizers and pesticides used for insect and vegetation control. Runoff that does not infiltrate to the groundwater table or evaporate at the surface eventually flows to the North and South Branches of Absecon Creek and then into the Upper Atlantic City Reservoir, which is the site for nine municipal drinking water wells.

On the other hand, the proposed deicing facility is intended to have a beneficial effect on water quality. If implemented, runoff fluids from aircraft deicing/anti-icing activities would be collected by a drainage system and disposed of, thereby reducing the volume of chemicals permitted to flow to the edge of pavement into ditches and swales and toward the receiving waters.⁵

Which mitigation measures are proposed, and what beneficial effects do they offer?

To minimize the adverse effects of the increased runoff and pollutant loading, stormwater BMPs have been incorporated into the proposed action. These specific measures include:

- *A Stormwater Management Plan* that would adequately control the quantity and quality of stormwater runoff. The increased volume of stormwater can be retained and

⁴There are no industrial process wastewater discharges associated with the proposed action.

⁵To remove and prevent the buildup of ice and snow on aircraft surfaces, the airlines must apply deicing or anti-icing agents to aircraft to ensure the safety of operations during freezing conditions. Deicing agents contain ethylene glycol which is highly soluble and rapidly biodegrades. When spent deicing fluids are mixed with stormwater and released into the environment, they cause oxygen depletion that can harm fish and other aquatic life.

infiltrated on site, thereby minimizing the potential for flooding. Underground infiltration systems (with or without detention or retention basins) are the most viable means of achieving the desired results.⁶ The infiltrators would be coupled with pretreatment devices (such as oil/water separators) that decrease the pollution contribution to surface water and groundwater resources.

Although there are only conceptual plans available at this time, the engineer's evaluation indicates that the proposed action can be designed to conform with stringent Pinelands Comprehensive Management Plan requirements and NJDEP's regulations for stormwater management.

- A *Stormwater Pollution Prevention Plan* that identifies potential sources of runoff pollution and implements procedures to avoid, minimize, and/or control pollutants in stormwater discharges. This includes in it a *Spill Prevention, Control and Countermeasures Plan* that prescribes steps to be taken to avoid hazardous material spills and tells how to minimize the risk of harm to surface waters in the event of an accidental release or spill. ACY already has these plans in place for existing facilities and operations, so they would be revised to include the proposed projects and new operations.
- A *Soil Erosion and Sediment Control Plan* that would be implemented during the excavation, grading, and construction phases of each project to reduce surface water pollution occurring as a result of sedimentation (caused by the loss of natural upper soil horizons resulting from construction-related activities).

Cultural Resources

The FAA Technical Center recently completed a thorough investigation of the presence/absence of prehistoric and historic resources on their property, including ACY. Only a few small sites were determined potentially eligible for listing on the National Register of Historic Places; the Environmental Assessment concluded that these resources were located in remote areas and would not be affected by the proposed action. Therefore, the preservation of cultural resources was not identified as a significant scoping issue.

- **Would the near-term or long-range projects adversely affect cultural resources in the project study area?**

None of the build alternatives would adversely affect the potentially-eligible resources. Furthermore, there would be no impact to areas identified as having moderate-to-high potential for either prehistoric cultural resources or historic archeological cultural resources. The NJ State Historic Preservation Officer (SHPO) concurred with these findings.

Biotic Communities: Vegetation and Wildlife

The many habitat types at ACY support a wide-ranging list of terrestrial and aquatic species (including state-listed and Pinelands-listed threatened and endangered species, which are addressed in the following section entitled *Threatened and Endangered Species*). Generally, ACY has an extensive grassland/shrub complex associated with the runways and taxiways, and this grassland/shrub complex is surrounded by forested wetlands and uplands. The diverse landscape and large contiguous area has made the FAA Technical Center (which includes ACY) an important environmental resource within the

⁶Although detention basins are more commonly used in the New Jersey Pinelands, they can also act as an attractant for birds and other wildlife. Therefore, basins cannot be located on airports near runways or taxiways.

New Jersey Pinelands region. Therefore, the potential effects to vegetative and wildlife communities was identified as a significant scoping issue to be addressed in the FEIS.

- **What major changes occurred between the draft and final EIS? How does the FEIS address them?**

The NJDEP Division of Fish and Wildlife's Endangered and Nongame Species Program recently established a new wildlife species status classification (Species of Special Concern) and developed an accompanying list of designated species. The new designation and list was adopted subsequent to the completion of the DEIS. Comments received in response to the DEIS requested that certain Species of Special Concern be addressed. The FEIS addresses not only those species, but all Species of Special Concern reported at ACY and also provides an assessment of potential impacts upon an offsite great blue heron rookery.

- **Would the proposed near-term projects adversely impact biotic communities?**

Yes. Implementation of the near-term projects would result in construction of new facilities in undeveloped areas of the airport, thus permanently reducing the amount of open space and vegetative cover that provides habitat for resident and transient species alike. The loss of habitat is being minimized to the extent practicable in the development of project alternatives but cannot be avoided if the project objectives are to be accomplished.

The proposed projects would, for the most part, occur in the grassland communities with lesser impacts to forested areas. Up to 93 acres of grassland could be eliminated, depending on the alternatives selected. The grassland areas adjacent to proposed taxiways and aprons would be subject to a short grass mowing regime. Both the direct loss of habitat and secondary impacts such as edge effect and fragmentation would change the way grassland-dwelling species utilize the airport property.

The impacts to forests mostly involve areas that are already fragmented and offer only marginal habitat value. However, the build alternatives for the hotel/conference center would each impact a different forest complex, resulting in varying degrees of potential impacts to forest-dwelling and migratory species.

- **Which mitigation measures are proposed?**

As discussed in the next section, a grassland conservation and management plan has been developed to compensate for the impacts to the upland sandpiper and grasshopper sparrow – two state-listed, grassland-dependent bird species. However, implementation of the *Grassland Conservation and Management Plan* would benefit most of the wildlife species but particularly Species of Special Concern and several rare, but unlisted, Lepidoptera that utilize grassland habitat at ACY.

This plan would, in part, compensate for disturbances to vegetation by restoring existing unvegetated areas such as dirt roads, developed land, and barren land. In addition, grassland temporarily disturbed by construction-related activities (such as grading) would be restored. Disturbances to forests would constitute permanent losses of these upland communities.

Landscaping of developed areas would be accomplished by utilizing native species in accordance with the standards contained in the Pinelands Comprehensive Management Plan. Strict adherence to BMPs would also reduce disturbances to the extent practicable. BMPs include, but are not limited to, seasonal timing restrictions (for construction, mowing, etc.) to minimize impacts to breeding wildlife. Twenty-nine environmental commitments were

developed in consultation with the NJDEP, USFWS, USDA Wildlife Services, Pinelands Commission, and FAATC to ensure that all proposed development would minimize impacts upon sensitive natural resources.

- Are there major issues or impacts associated with the long-range projects?

Yes. Two of the long-range projects would adversely affect major vegetation communities and habitats: the direct access roadway would result in the direct loss and fragmentation of forest habitats, while the Runway 4-22 extension would impact both grasslands and forest communities. These communities provide habitat for many wildlife species, and the construction of these projects would result in displacement of a substantial number of species, particularly forest interior and Neotropical migratory species.

Threatened and Endangered Species

With the exception of one occasional transient species (bald eagle), there are no federally-listed threatened or endangered species recorded at ACY. However, over the past 20 years, surveys and research have identified the presence of 20 state-listed or Pinelands-listed threatened or endangered species, including seven documented breeding wildlife species (grasshopper sparrow, upland sandpiper, Cooper's hawk, barred owl, Pine Barrens treefrog, Northern pine snake, and frosted elfin) and four known plant populations (Pine Barrens gentian, narrow-leaved vervain, broom crowberry, and Pine Barrens reedgrass). Therefore, potential impacts to threatened and endangered species were identified during scoping as the most significant issue to be addressed in the FEIS.

- What new information is included in the FEIS either as the result of new species classifications or as the result of comments received on the DEIS?

The frosted elfin (*Callophrys [Incisalia] irus*) was an unlisted species during the scoping, research, and development phases of the DEIS. Because the frosted elfin was afforded no regulatory standing, *quantification* of habitat was not performed for the DEIS, although the species did receive special recognition owing to its regional importance and potential for future listing. Potential impacts upon this species were discussed qualitatively, based on several resources cited in the DEIS. It was not until after the DEIS was complete that the frosted elfin attained state-threatened status. In response to its newly-listed status, a Frosted Elfin Habitat Map was generated (in consultation with the NJDEP, USFWS, USDA Wildlife Services, FAATC, and an independent Lepidoptera expert) for the purpose of quantifying potential impacts to the species. The newly-prepared *Frosted Elfin Habitat Map and Impact Assessment Report (Appendix J)* confirms the findings of the DEIS, namely that the near-term projects would have minimal negative effect upon habitat supporting the frosted elfin. Furthermore, the *Grassland Conservation and Management Plan* with its environmental commitments would have no adverse effect upon the frosted elfin. The NJDEP recently issued a letter concurring with these findings.

Comments received in response to the DEIS assert that certain nonbreeding threatened and endangered species (vesper sparrow, Savannah sparrow, and Northern harrier) were not adequately addressed and requested that surveys be conducted for the vesper sparrow and Savannah sparrow. It was previously determined (during scoping) that rigorous analysis of impacts (including surveys) would be limited to known breeding species. Vesper sparrow and Savannah sparrow are not documented breeding species at ACY, and, therefore, additional surveys for these two species were not conducted, nor was a quantitative assessment of impacts performed. However, the FEIS expands the qualitative discussions presented in the DEIS for these species as well as additional nonbreeding threatened and endangered species reported to occur at ACY.

- How would the near-term projects adversely affect listed species, or how would those projects impact habitat that is critical to the survival of local populations of those species?

The proposed project alternatives are almost all located within the grassland/shrub complex. Development within this grassland area would reduce the amount of habitat available for several nonbreeding species, although the impacts would be appreciably greater to two *breeding species* of birds, namely the upland sandpiper and the grasshopper sparrow. Three of the proposed alternatives (both hotel/conference center alternatives and one of the ILS alternatives) require forested areas to be cleared, which would reduce the amount of habitat for one forest-dwelling bird, the Cooper's hawk. Methods to minimize impacts upon threatened and endangered species habitat are included for each alternative considered.

- How were the impacts to upland sandpiper and grasshopper sparrow assessed?

Two independent survey and modeling applications were used to establish baseline conditions and to quantify impacts upon upland sandpiper and grasshopper sparrow habitat: the 1993 critical habitat maps and Habitat Evaluation Procedures (HEP). The FEIS strives to best define existing conditions, assess impacts, evaluate alternatives, and mitigate for habitat loss. By making use of, where appropriate, the 1993 critical habitat maps and HEP, these objectives are accomplished.

HEP uses a habitat unit (HU) as the standard measurement, integrating both quality and quantity of the habitat being evaluated. Reductions in HUs represent negative impacts to habitat due to development. Conversely, increases in HUs represent improvements to existing habitat or the introduction of new (suitable) habitat resulting from mitigation. To demonstrate no net loss (neutral or positive effect), for every HU lost from development, there must be, at a minimum, a proportionate gain of HUs from mitigation.

In lieu of running the HEP analysis for each and every alternative considered, the impacts attributed to each alternative were quantified on a per acre basis according to the 1993 critical habitat maps. Thus, the 1993 critical habitat maps function as an environmental baseline from which to draw preliminary conclusions for the alternatives analysis. Once the preferred alternatives (listed below) were identified, the HEP was then used to reassess baseline conditions and to quantify the potential impacts of habitat changes affecting the upland sandpiper and grasshopper sparrow. The preferred alternatives assessed in the HEP analysis are

- Terminal Area Expansion (Build Alternative)
- Auxiliary Development in the Southwest Quadrant (Build Alternative 2)
- Parallel Taxiway for Runway 4-22 (Build Alternative)
- ILS Upgrades (Build Alternative 2)
- Holding Aprons (Build Alternative)

- Were there major points of controversy regarding the application of HEP, and, if so, how were they resolved?

In the DEIS, disparities between the results of a previous USFWS HEP Team analysis performed at ACY and the HEP analysis performed for the DEIS prompted the USFWS and NJDEP to request that the HEP be rerun between the draft and final EIS. In response to these comments, three interagency workshops were held to explain the key differences between the two HEP models and to gain consensus on proposed changes to the DEIS HEP. As a result of this interagency coordination, there is now a fundamental understanding between the USFWS, NJDEP, Pinelands Commission, and USDA Wildlife Services that the results of

the previous USFWS HEP Team analysis cannot be replicated. More importantly, these agencies concur with the approach and findings of the revised HEP analysis presented in the FEIS.

The results of the revised HEP analysis indicate that implementation of the preferred project alternatives for each of the above-mentioned projects would result in the reduction of 48.09 HUs for the upland sandpiper and 74.40 HUs for the grasshopper sparrow.

- **What grassland mitigation measures are proposed? How was the effectiveness of this mitigation assessed?**

Critical grassland habitat cannot be avoided and still achieve the project objectives, so a habitat protection plan has been developed to ensure there would be no net loss in habitat value as a result of the preferred alternatives. To compensate for the expected loss of grassland habitat, the northwest quadrant of the airport would be set aside as a grassland conservation and management area to benefit the upland sandpiper and grasshopper sparrow, and cover types would be converted to those that are more desirable for these two species.

Specifically, the *Grassland Conservation and Management Plan* provides for habitat creation and enhancement that would effectively offset the development of existing habitat. Habitat creation involves converting unsuitable habitat to optimum habitat for the target species, while enhancement involves modifying less suitable habitat to optimum habitat for the same target species. The management component establishes the long-term plan to maintain the created/enhanced habitat *as well as* the existing habitat in ways that benefit the upland sandpiper, grasshopper sparrow, and other grassland-dependent species at the airport. Additionally, a list of environmental commitments have been developed to ensure that project construction, implementation of the *Grassland Conservation and Management Plan*, and continued management of the 290-acre grassland conservation and management area are implemented as proposed and do not adversely affect threatened and endangered species.

The revised HEP analysis was applied to evaluate the effectiveness of the *Grassland Conservation and Management Plan* and to quantify its potential benefits. For the upland sandpiper, 77.06 HUs were gained, representing a 24 percent increase in habitat suitability (when only 48.09 HUs were needed to show no net loss). For the grasshopper sparrow, 86.79 HUs were gained, representing a 14 percent increase in suitable habitat (when only 74.40 HUs were needed to show no net loss). Thus, the HEP analysis demonstrates that the proposed *Grassland Conservation and Management Plan* for the upland sandpiper and grasshopper sparrow would offset the potential impacts due to the preferred project alternatives.

- **Does the *Grassland Conservation and Management Plan* benefit only the upland sandpiper and grasshopper sparrow?**

Although the mitigation/management plan targets the upland sandpiper and grasshopper sparrow, additional grassland-dependent species and foraging raptors would benefit as well. The focus of the *Grassland Conservation and Management Plan* is the creation of a modified grassland community through the reduction in the percentage of shrubs and an increase in native species of warm season grasses and forbs. The spacial configuration of the grassland conservation and management area is such that it would provide extensive, contiguous grassland and multiple habitat opportunities for the range of breeding and nonbreeding grassland birds and other species reported at ACY – opportunities that otherwise would not be available in the present shrub-dominated communities in the northwest quadrant of the

airfield. Certain portions of SJTA property were not considered as potential mitigation areas because of the abundance of frosted elfin sightings in these areas. Other areas were excluded from mitigation because of the presence of the Pine Barrens gentian (a Pinelands-listed plant species). Shrub-dominated communities would be set aside in part of the northwest quadrant of the airfield at the eastern end of the airfield and in designated fields south of Tilton Road to benefit two shrub-dependent, rare species: the notodontid moth (unlisted) and Albarufan dagger moth (unlisted).

With strict adherence to proposed environmental commitments, the *Grassland Conservation and Management Plan* would not result in a significant adverse impact upon habitat critical to the survival of local populations of the frosted elfin. In fact, the proposed *Grassland Conservation and Management Plan* would protect habitat determined to be suitable for the frosted elfin and may encourage higher utilization of the area.

- **Where there any other major points of controversy pertaining to this section of the DEIS?**

Yes. Comments received in response to the DEIS contend that noncompliance with the airfield mowing plan has resulted in the modification of a grass-dominated to shrub-dominated airfield community and assert that mismanagement is responsible for the decline of the upland sandpiper population at ACY. As a result of subsequent agency coordination (described above), there now is general consensus among the NJDEP, USFWS, and USDA Wildlife Services that: 1) improper management (two year cessation in mowing the shrub-dominated region of the northwest quadrant of the airfield) has not resulted in an increase in shrub-dominated habitat, 2) the decline of the upland sandpiper at ACY is not well understood and is likely to be the result of numerous factors, and 3) future adherence to an approved management plan is important for the future survival of the species. There is also general consensus among these agencies that the proposed *Grassland Conservation and Management Plan* is adequate to compensate for habitat losses due to near-term development projects; however, the USFWS stipulated later that consensus from their agency is predicated on resolving the frosted elfin issues.

- **Are there major issues or impacts associated with the long-range projects?**

Yes. The most significant impacts to threatened and endangered species would result from the direct access roadway and the extension of Runway 4-22. The direct access roadway would reduce and fragment wetland and upland forest area that provides habitat for the barred owl, Cooper's hawk, Northern pine snake, and Pine Barrens treefrog. There would also have to be a reduction in the NJDEP-protected habitat management zones for the barred owl and Cooper's hawk.

Depending on the alternative, the extension of Runway 4-22 has the potential to significantly impact the upland sandpiper, grasshopper sparrow, frosted elfin, and Pine Barrens gentian. In addition, there could be severe impacts to the Cooper's hawk, barred owl, Pine Barrens treefrog, and the Northern pine snake (again, depending on the alternative).

The impact assessment of long-range projects is subject to refinement and further analysis in accordance with FAA guidelines and NEPA requirements. Therefore, the impacts are not quantified at the same level of detail as the proposed projects. The *Grassland Conservation and Management Plan* developed for near-term projects provides a surplus of habitat units that could help offset impacts from the long-range projects as well.

Wetlands

Amidst the actively maintained areas of the airport, there are several small, isolated, low-quality wetlands that are mostly associated with depressions or drainage features such as ditches and swales. In the outlying areas of the airport, however, there is an extensive forested wetland complex which is associated with the North and South Branches of the Absecon Creek. Ecologically, these wetlands are of exceptional quality. The wetlands provide nesting and breeding habitat for several threatened and endangered species and two rare species of wetland-dependent Lepidoptera. Many forest interior birds and other wildlife are dependent upon these large unbroken tracts of forested wetlands. In addition, the USFWS Wetland Evaluation Technique (WET) ranked these wetlands high in terms of wildlife diversity and abundance, groundwater recharge and discharge, and sediment toxicant retention functions. Most wetlands on the airport are regulated by the Pinelands Commission and NJDEP, regardless of their value. Therefore, the protection of wetlands was identified as a significant scoping issue to be addressed in the FEIS.

- **What major changes occurred between the draft and final EIS? Where there any major points of controversy? How does the FEIS address them?**

After publication of the DEIS, a jurisdictional determination was performed by the Pinelands Commission to establish the presence of regulated wetlands within select areas on the airport. The evaluation was limited to wetlands that have become established as a result of grading or other anthropomorphic activities in upland areas. The Pinelands Commission determined that certain airfield wetlands are not regulated by their agency but that another wetland in the vicinity of the holding apron project is regulated. The elimination of certain airfield wetlands reduces the total acreage of wetland impact, and in a few instances eliminates encroachment into the 300-foot (worst-case regulatory scenario) transition area.

Comments on the DEIS suggested that the absence of a wetlands delineation precludes accurate analysis of the true effects that the proposed action would have on wetland resources. During the EIS scoping process, it was determined that potential impacts to wetlands would be assessed using an updated version of the USFWS *National Wetlands Inventory* prepared specifically for ACY, supplemented by field verification by a qualified wetland ecologist. The Pinelands Commission had no objection to this approach because formal delineation would be required as part of the permit application process. The preliminary quantification presented in the FEIS provides a point of comparison for wetland impacts attributed to (or resulting from) implementation of each alternative and also provides sufficient information to assess the significance/severity of cumulative wetland loss at this time. Further, the analysis demonstrates that the potential wetland impacts resulting from near-term projects can be reasonably mitigated.

- **How would wetland areas be affected by the near-term projects?**

The build alternatives occur mostly in the infield areas of the airport, so the potential impacts are limited to filling in a few of the isolated (low-quality) wetlands and wetlands associated with drainage ditches. The affected wetland areas range from 1.39 to 2.67 acres, depending on the alternatives selected.⁷ In sum, the quantity of wetland impacts and ecological loss would be relatively minor. None of the near-term project alternatives would encroach upon the high-quality forested wetlands associated with the North and South Branches of Absecon Creek.

⁷Wetland impacts have been estimated and are subject to refinement after formal delineation and final plan design.

- Is mitigation for these effects necessary, and, if so, what types of measures are being considered?

Mitigation would be necessary to compensate for the wetland impacts arising from the proposed action and would have to compensate fully for the loss of any ecological value. Several mitigation strategies are discussed in the FEIS and include upland preservation, wetland restoration, wetland creation, and/or wetland enhancement. The functions and values of restored, created, or enhanced wetlands are expected to far outweigh those lost. A wetland mitigation plan would be developed after an approach is decided upon, and it would need to be approved by the NJDEP as well as the Pinelands Commission.

- Are there major issues or impacts associated with the long-range projects?

Yes. The direct access roadway and the extension of Runway 4-22 both affect forested wetlands (or their transition areas) associated with the South Branch of Absecon Creek and are considered to be of exceptional quality. The degree of impacts would depend on the final roadway alignment and how far Runway 4-22 is extended to the south, but any impact would be considered potentially significant.

Because the SJTA's property north of the White Horse Pike is comprised of approximately two-thirds wetlands, any development in this area has the potential to affect wetlands or wetland transition areas associated with the North Branch of Absecon Creek. In addition, the NJDEP has targeted this area for habitat protection because it contains suitable breeding habitat for barred owl and Cooper's hawk. Any impact to these wetlands would be considered potentially significant as well.

Floodplains

According to the Federal Emergency Management Agency (FEMA), flood-prone areas are associated with the North and South Branches of Absecon Creek. However, the Environmental Assessment indicated that impacts were not likely to occur as a result of the proposed action. Therefore, impacts to floodplains were not considered to be a significant issue or concern.

- Would the near-term projects cause development to occur within 100-year or 500-year floodplains?

No.

- Are there major issues or impacts associated with the long-range projects?

Yes. Due to the linear nature of these floodplains, it is unlikely that flood-prone areas could be avoided if the direct access roadway were to be developed. Based upon the current conceptual alignment for the roadway, approximately two acres of 100-year floodplains (Zone A) along the South Branch of Absecon Creek would be impacted.

These same floodplains would also be affected by the extension of Runway 4-22. The nature and extent of development that would have to occur in the floodplains varies for each alternative – the further south the extension, the greater the degree of the impacts. Based on the conceptual plans prepared so far, between six and 30 acres of floodplains could be impacted if the runway were to be extended.

Traffic and Transportation

The Environmental Assessment included a detailed traffic analysis, which indicated that significant traffic impacts were not likely to occur as a result of the proposed action. Local conditions have not changed substantially since that report was prepared. Therefore, traffic congestion or other transportation-related problems were not identified as a significant issue or concern to be addressed.

- In general, how would the near-term projects affect traffic volumes or patterns in the project study area?

If the proposed projects are implemented, the number of passengers, visitors, guests, and employees would increase, thereby adding airport and hotel-related traffic volume to the study area roadways. However, the projected increase is not expected to require any new public roadways or facilities because there will be sufficient roadway capacity available to accommodate the worst-case traffic demands. For instance,

- On the airport, Terminal Road and Amelia Earhart Boulevard function very well and have adequate capacity to accommodate forecast demand even with the proposed action. Signal timing changes at the intersection of these two roadways would resolve the traffic delays that are projected to occur during late afternoon rush hours.
- Outside the airport, the local roadway network performs adequately and will continue to do so for the foreseeable future because Atlantic County is improving two nearby intersections.⁸ Those projects will increase safety and efficiency along Tilton Road, Delilah Road, through the Airport Circle, and along Wrangleboro-Pomona Road as well.

- Are there major traffic impacts or other issues associated with the long-range projects?

Long-range activity forecasts were used to predict future levels of service for the study area roadways, and no new roadways or facilities were identified as being needed at this time. However, the SJTA does have a long-range plan for a direct access roadway that would connect the airport with the Atlantic City Expressway, if the need for such a roadway arises. The direct access roadway would separate FAA employee traffic from airport traffic, thereby allowing the two traffic streams to operate more efficiently. The project is depicted on the Airport Layout Plan to indicate how the project could be implemented if and when needed.

Energy Supply and Utilities

The potential for substantial changes in the demand for energy or public utility services was not a significant issue or concern. A utilities assessment was performed; it concludes that there is sufficient system capacity in all services to adequately accommodate the projected demands associated with the proposed action.

Light Emissions

The potential for increased annoyance due to changes in airport light emissions was not a significant issue or concern. The proposed action includes additional ground-mounted and pole-mounted lighting that is required for various airport facilities and also for aircraft operations during nighttime and periods of **low** visibility. However, any changes in ambient or directional lighting would

⁸The County's projects are being implemented whether the airport's proposed projects are implemented or not – so these were not considered to be "connected" actions.

not be noticeable because the proposed projects are centrally located on airport property and adequately buffered from off-airport land uses, including any homes or businesses.

Solid Waste

The disposal of additional solid waste resulting from the proposed action was not identified as a significant scoping issue. As is the current practice, the additional solid waste would be collected by a private hauler and shipped to an out-of-state landfill. Even if this method were not used and solid waste had to be disposed of locally, the Atlantic County landfill has adequate capacity until 2020.

- **Were any solid waste issues or concerns raised during scoping?**

Yes. There was a scoping comment that expressed concern over the proximity of the airport to a nearby landfill and whether increased air operations resulting from the proposed action could increase the risks associated with wildlife hazards to aircraft (e.g., bird strikes).

ACY lies within two miles of Haneman Landfill. The landfill activities are strictly controlled (dumping occurs only at night when bird activity is minimal). The operators also use both passive and aggressive techniques to minimize bird activity, and there is a daily bird monitoring/counting program. According to the most recent quarterly reports, bird activity at the landfill has been decreasing, and there have been no closures of the landfill due to unacceptable levels of bird activity. Because mitigation techniques are already in place effectively dealing with potential wildlife hazards, no further action or mitigation is proposed as part of this FEIS.

Hazardous Materials and Waste

The FAA Technical Center, which includes ACY, is listed on the EPA's National Priorities List (NPL) as a Superfund cleanup site. Within the project study area, there are 32 Areas of Concern (AOCs) that are in various stages of investigation and/or remediation. Several of these AOCs are hazardous waste sites that could be impacted by the alternatives being considered. Federal actions involving Superfund cleanup sites are considered "significant" by definition; therefore, hazardous materials and waste was identified as a significant scoping issue to be addressed in the FEIS.

- **Would the near-term projects increase risks to human health and the environment?**

The potential risks to human health and the environment would be low or nonexistent because the alternatives avoid any AOCs where remedial activities are ongoing. The only AOCs that would be disturbed are those where investigations have already occurred, remedial activities have been completed, and the site has been approved for use.

- **Which mitigation measures are included in the proposed action?**

There is little or no expectation of encountering contaminated media, so no remedial activities are proposed. BMPs could be implemented to ensure the health and safety of workers during construction. If construction-related activities such as excavation result in the discovery of previously unknown hazardous waste, then work on the project would stop, and the site would be turned over to the responsible federal or state agency until the waste material is removed and disposed of in accordance with applicable regulations.

- Are there major issues or impacts associated with the long-range projects?

The direct access roadway, the extension of Runway 4-22, and the non-aviation development along the White Horse Pike all have the potential to affect ongoing investigative and remedial activities. Given the nature and extent of contamination in the affected areas, the potential risk to human health and the environment could range from moderate to high.

The long-range projects addressed in this FEIS require project-specific analysis, evaluation of design level alternatives, and mitigation measures prepared in accordance with NEPA. Therefore, no action is being taken on the long-range projects at this time.

Other (Section 4(f), Farmland/Soils, Coastal Zone Management, Coastal Barriers, and Wild/Scenic Rivers)

- Were there adverse effects associated with any other environmental impact categories?

No. The proposed action would not adversely affect public parks, recreation areas, designated wildlife/waterfowl refuge areas, or historic sites; it would not affect coastal zone management areas or coastal barrier systems; nor would it affect designated wild or scenic rivers – because these resources do not exist in the project study area.

The proposed action would also not adversely affect farmlands as designated by the Atlantic County Soil Conservation Service. Although some of the soils are listed as prime, unique, or otherwise important, the airport property is committed to urban/transportation uses, so the soils no longer retain their agricultural designation.

Construction Impacts

Construction-related effects are considered temporary and normally not significant unless there are unusual circumstances (e.g., especially large projects causing substantial urban effects). Because ACY is an ecologically-sensitive area, it is possible that the adverse effects of development could be made worse by construction activities if proposed mitigation measures are not incorporated into the development plans. However, construction impacts were not identified as a significant issue during the scoping process.

- What construction-related impacts would be expected to occur?

Construction activities resulting from the airport development alternatives may include, but are not limited to, temporary adverse effects (e.g., noise disturbance, increased air emissions, soil erosion and sedimentation, and increased traffic). These impacts are short term in nature and can be minimized through the establishment and utilization of BMPs.

- Are mitigation measures included in the proposed action?

To minimize construction impacts, environmental controls (such as timing restrictions to avoid breeding and nesting periods) and BMPs (such as restoring grassland areas affected by grading) would be included throughout the preparation of the plans and specifications for the proposed construction projects. These controls would be used to minimize temporary noise, air, erosion, and traffic impacts associated with construction activities. In addition, the proposed *Grassland Conservation and Management Plan* includes measures to avoid, reduce, and/or minimize adverse effects to grassland species and habitat.

Cumulative Effects

The environmental changes caused by the SJTA's management and operation of ACY are not the only effects that need to be considered in this FEIS. The FAA Technical Center, the NJANG, and the USCG also make improvements to support their respective missions. Atlantic County is responsible for the surrounding area's roadway improvements as well. All of this development – past, present, and future – affects the study area, so it would be reasonable to consider that the impacts associated with the SJTA's actions could cause (or contribute to) significant cumulative effects when added to the impacts of the other agencies' actions. On this basis, cumulative effects were identified as a significant scoping issue to be addressed in the FEIS.

- Which impact categories were identified as potential areas of concern?
 - Noise and compatible land use
 - Secondary impacts
 - Air quality
 - Water quality
 - Biotic communities
 - Threatened and endangered species
 - Hazardous materials and waste

Noise and Compatible Land Use

The noise analysis prepared for the FEIS includes all aircraft operations – civilian and military, existing and forecast – as well as vehicular traffic noise. With airport and roadway noise combined, the analysis indicates that noise levels are expected to diminish over time because the older, noisier (Stage 2) airplanes are being replaced with newer, quieter (Stage 3) airplanes. No additional adverse impacts to residential land uses have been identified.

Secondary (Induced) Impacts

The assessment of secondary impacts prepared for the FEIS considers the airport's total employment (including the FAA Technical Center and the NJANG). The number of new hires over a ten-year period is approximately 1,000 – many of whom probably live in the area already. Further, Atlantic County is a regional growth center that can easily accommodate the additional demand for housing and infrastructure.

Air Quality

The air quality analysis prepared for the FEIS considers all mobile sources on the airport – civilian and military, existing and forecast – as well as future stationary sources. The results indicate that air emissions would remain below established thresholds and that the EPA's conformity requirements would not apply.

Water Resources

The surface water effects discussed in the FEIS would increase with the other agencies' development projects, but no potentially significant impacts were identified. All stormwater discharges are regulated through the NJDEP's permit program to ensure compliance with applicable water quality standards. The groundwater assessment indicates there would be no appreciable degradation or deprivation of the water table or the aquifer below.

Biotic Communities

Impacts to biotic communities resulting from past and present projects have been adequately compensated for by using mitigation and management techniques to improve the suitability of other areas of ACY that had little or no habitat value. So far, the mitigated effects of past and present projects have been determined to be individually minor. Future actions would continue to reduce the amount of grassland and forest interior resources available for resident and transient species. More specifically,

- In addition to the approximately 93 acres of grassland that would be removed due to the SJTA's near-term projects, it is estimated there could be another 36.5 acres needed for the SJTA's long-range projects and other agency development actions. The SJTA's proposed mitigation/management plan could be used to mitigate for (a portion of) their future projects. The FAA Technical Center and the NJANG would be responsible for their own mitigation.
- Approximately 92 acres of upland forest would be removed due to the SJTA's near-term and long-range projects combined⁹ – that is, five percent of the total forest area on the airport. This would permanently affect wildlife habitat through direct loss, fragmentation, and edge effect. No mitigation is proposed.

Threatened and Endangered Species

Several state-listed threatened and endangered species are susceptible to the cumulative effects of projects and actions undertaken within the study area, particularly those projects/actions that adversely affect the grassland and forest areas which support such species. Breeding populations of the upland sandpiper, grasshopper sparrow, and frosted elfin are of primary concern. Other species of concern include the barred owl, Cooper's hawk, Pine Barrens treefrog, Northern pine snake, narrow-leaved vervain, and Pine Barrens gentian. Even though no single project or action in the past five years has significantly impacted grassland-dependent species, resident populations of the upland sandpiper are declining.

The future projects/actions identified in the FEIS have the potential to significantly impact these threatened and endangered species. Further planning and analysis, including mitigation, will be needed before these projects can be considered for development approval.

Hazardous Materials and Waste

In the past five years, no development action has caused or contributed to the long-standing hazardous waste problems in the study area. The FAA's ongoing Superfund cleanup activities are expected to continue in accordance with CERCLA requirements. The City of Atlantic City has satisfactorily cleaned up their (two) sites, and the NJDEP is expected to approve them for use. The FEIS indicates that the potential risks to human health and the environment as a result of the proposed action would be low and can be adequately managed/minimized by using BMPs during construction. Finally, there are no other foreseeable projects or actions that would adversely affect hazardous waste sites. No significant cumulative effects are anticipated.

⁹There was insufficient information to quantify the effects of the other agency actions.

Summary of Key Issues and Measures to Minimize Harm

- List the adverse environmental effects that cannot be avoided should the proposed action be approved and the preferred alternatives implemented.

Unavoidable adverse effects would occur as a result of increased airport utilization, additional impervious cover, loss of existing vegetation, and redevelopment of a Superfund cleanup site. The adverse effects include: increased noise, air, and water pollution; loss of wetlands; loss or diminished value to grassland and forested habitat that may be suitable for state-listed (endangered or threatened) and rare species; increased energy consumption, solid waste disposal, vehicular traffic, and light emissions; and potential risks to human health and safety. In addition, the adverse effects caused by *this* proposal would contribute to the cumulative effects resulting from other independent regional growth activities. The significant issues and concerns (identified during scoping and evaluated in the FEIS) are summarized in Table ES-6.

- What are the irreversible/irretrievable commitments of resources which would be involved in the proposal should it be implemented?

The proposed action would reduce natural ground cover and vegetation. The preferred alternatives result in the irreversible/irretrievable loss of 93 acres of grassland habitat, which includes habitat for three state-listed species – upland sandpiper, grasshopper sparrow and frosted elfin. Implementation of the *Grassland Conservation and Management Plan* contained in the FEIS demonstrates, however, that the permanent impact to these species would be negligible. The preferred alternatives also eliminate 27.72 acres of upland forest and 1.39 acres of freshwater wetlands, which would be mitigated and permitted in accordance with regulatory requirements. See also Table ES-6.

- What are the proposed methods for mitigating adverse environmental impacts?

Any action that reduces, minimizes, avoids, or compensates environmental impacts is a mitigation measure. Mitigation is a particularly important concept in this FEIS – so much so that the following mitigation measures are included in the proposed action and, more specifically, the preferred alternatives.

- The preferred alternatives minimize impacts to threatened and endangered species habitat to the maximum extent practicable and the proposal includes a 290-acre *Grassland Conservation and Management Plan* to compensate for impacts that cannot be avoided. The plan also minimizes impacts to other grassland species, including nonbreeding threatened and endangered species, rare species, and Species of Special Concern.
- The preferred alternatives avoid wetlands with high ecological value, minimize impacts to wetlands to the maximum extent practicable, and a wetlands mitigation plan would be prepared to compensate for impacts that cannot be avoided.
- The preferred alternatives reduce stormwater discharge (by minimizing the loss of natural ground cover) and minimize impacts by incorporating a Stormwater Management Plan with best management practices for retaining, pretreating, and infiltrating increased runoff that cannot be avoided. The plan includes environmental commitments and best management practices to be incorporated into conditions and/or specifications for construction and operation of the airport. Further reductions in water pollution would be achieved by constructing an aircraft deicing facility with a drainage

system to collect glycol contaminated stormwater runoff for off-site treatment or disposal.

- The preferred alternatives avoid hazardous waste sites where investigative or remedial activities are ongoing and include provisions for appropriate health and safety plans for projects involving (remediated) waste sites.

The proposed mitigation measures are summarized in **Table ES-6**.

In response to agency comments on the DEIS, the SJTA **has** consented to an additional list of 29 Environmental Commitments to ensure that the effects of the proposed action on endangered and threatened species would be minimized.¹⁰ These mitigating measures include: requirements for management of the airport for threatened and endangered species and continued coordination with involved agencies; standards for the conservation and management of grassland habitat on the airport; seasonal restrictions on construction and maintenance activities; and monitoring and reporting requirements to ensure adherence to these conditions. If approved, the commitments would be included as conditions to the FAA's Record of Decision to be adhered to by the SJTA during project implementation (e.g., design, construction, operations).

- **Are there permits, licenses, or other entitlements which must be obtained in implementing the proposal?**

Yes. Applicable permits and other regulatory requirements were identified through agency consultation and are identified in the appropriate sections of the FEIS. They are also summarized in Table ES-6.

¹⁰Technically an EIS does not make any commitments so their listing here does not require the SJTA to implement them. Commitments to implement mitigation measures are made in enforceable documents such as a Record of Decision, Memorandum of Agreement, or as conditions of permits.

Table ES-6
Summary of Key Issues and Measures to Minimize Harm

| Impact Category / Significant Issue and/or Concern | Unavoidable Adverse Impacts / Irreversible/Irrecoverable Commitments of Natural Resources | Mitigation Measures / Permits and Regulatory Program Requirements |
|--|---|--|
| Noise and Land Use | <p>Increased noise exposure</p> <p>The proposal would increase aircraft takeoffs, landings, and overflights of residences near the airport</p> <p>Up to 5 (existing) residents would still be adversely affected by incompatible noise levels</p> | <ul style="list-style-type: none"> • No mitigation is proposed because the predicted noise levels are below established thresholds for noise mitigation • No regulatory permits or requirements apply; however, the SJTA is voluntarily preparing an FAR Part 150 Noise Study to consider alternatives for reducing residential noise exposure |
| Induced Development | <p>Increased demand for housing, unanticipated growth</p> <p>There are no foreseeable or discernable adverse effects beyond the study area</p> | <ul style="list-style-type: none"> • No mitigation is proposed. • All development plans must comply with Pinelands CMP standards and be approved by the NJ Pinelands Commission |
| Air Quality | <p>Increased air pollution</p> <p>The proposal would increase airport operations and automobile traffic that contribute emissions of air pollutants</p> | <ul style="list-style-type: none"> • No mitigation is proposed because the predicted emissions are below EPA and NJDEP standards • No regulatory permits or requirements apply |
| Water Resources | <p>Increased storm runoff, pollutant loading, net change of stream flow, decreased aquifer recharge</p> <p>The preferred alternatives would eliminate 86 acres of natural ground cover (buildings, aprons, roads, etc.)</p> | <ul style="list-style-type: none"> • The preferred alternatives <u>minimize</u> development to the extent practicable. In addition, the SJTA would be required to prepare a <i>Stormwater Management Plan</i> with BMPs for onsite retention pretreatment, and infiltration of runoff • Stormwater management plans must comply with Pinelands CMP standards and NJDEP regulatory requirements |
| | <p>Non-point source pollution</p> <p>The proposal would increase urban/industrial area runoff contamination (e.g., petroleum, sediment, nutrients, pesticides, etc.)</p> | <ul style="list-style-type: none"> • The SJTA would be required to prepare a <i>Stormwater Pollution Prevention Plan</i> (with a <i>Spill Prevention, Control, and Countermeasures Plan</i>) for managing non-point source pollution through the application of water quality BMPs • The current NJPDES permit would be updated and testing would continue to ensure that pollutant levels are compatible with NJDEP water quality goals (e.g., effluent limits) |
| | <p>Biodegradation</p> <p>The proposal would increase airport operations and the use of deicing/anti-icing agents (glycol) that contaminate stormwater and can harm fish and other aquatic life</p> | <ul style="list-style-type: none"> • The proposal includes a deicing apron and drainage system designed to <u>reduce</u> existing biodegradation by capturing and storing glycol contaminated runoff for off-site treatment/ disposal • Discharges to the sanitary sewer system must conform to pre-approved release rates established by the ACMUA. |
| | <p>Construction-related sediment loads</p> <p>The proposal would increase construction activities that cause soils to erode, which can increase suspended solids and sedimentation in area streams and receiving waters</p> | <ul style="list-style-type: none"> • The SJTA would be required to prepare a <i>Soil Erosion and Sediment Control Plan</i> to <u>minimize</u> erosion and its effects during construction • For applicable projects, E&S plans are subject to review and approval of the Pinelands Commission and the USDA Natural Resource Conservation Service |

Table ES-6
Summary of Key Issues and Measures to Minimize Harm

| Impact Category / Significant Issue and/or Concern | Unavoidable Adverse Impacts / Irreversible/Irretrievable Commitments of Natural Resources | Mitigation Measures / Permits and Regulatory Program Requirements | |
|--|---|---|---|
| Biotic Communities | Loss or diminished value of grassland habitat | The preferred alternatives would eliminate 93 acres of existing grassland habitat. Additional edge effect and fragmentation would reduce habitat value | <ul style="list-style-type: none"> The preferred alternatives <u>minimize</u> development in grassland areas to the extent practicable; environmental commitments further <u>minimize</u> potential impacts by imposing timing restrictions on development and grassland BMPs, and the <i>Grassland Conservation and Management Plan</i> <u>compensates</u> for impacts that cannot be avoided Development plans (including mitigation) must comply with Pinelands CMP standards |
| | Loss or diminished value of forested habitat | The preferred alternatives would eliminate 27.72 acres of existing forest habitat Additional edge effect and fragmentation would reduce habitat value | <ul style="list-style-type: none"> The preferred alternatives <u>minimize</u> development in forested areas to the extent practicable, and environmental commitments further <u>minimize</u> potential impacts by imposing timing restrictions on forest clearing Development plans must comply with Pinelands CMP standards |
| Threatened- Endangered Species <i>(state-listed and Pinelands-listed)</i> | Upland sandpiper (loss or diminished value of critical habitat) | The preferred alternatives would eliminate 78.66 acres of critical habitat | <ul style="list-style-type: none"> The preferred alternatives <u>minimize</u> development in critical grassland habitat to the extent practicable; environmental commitments further <u>minimize</u> potential impacts through timing restrictions on development and grassland BMPs, and the <i>Grassland Conservation and Management Plan</i> <u>compensates</u> for impacts that cannot be avoided Development plans (including mitigation) must comply with Pinelands CMP standards |
| | Grasshopper sparrow (loss or diminished value of critical habitat) | The preferred alternatives would eliminate 60.43 acres of critical habitat | <ul style="list-style-type: none"> Development plans (including mitigation) must comply with Pinelands CMP standards |
| | Frosted elfin (loss or diminished value of suitable habitat) | The preferred alternatives would eliminate 4.107 acres of suitable habitat | <ul style="list-style-type: none"> The preferred alternatives <u>avoid</u> development in critical habitat and <u>minimize</u> development in suitable habitat to the extent practicable; environmental commitments further <u>minimize</u> potential impacts and the <i>Grassland Conservation and Management Plan</i> <u>compensates</u> for impacts that cannot be avoided Development plans (including mitigation) must comply with Pinelands CMP standards |
| | Cooper's hawk and barred owl (loss or diminished value of habitat) | The preferred alternatives would eliminate 14.65 acres of NJDEP-designated protected habitat (no nesting birds would be displaced) Additional edge effect and fragmentation would reduce habitat value | <ul style="list-style-type: none"> The preferred alternatives <u>avoid</u> known nesting areas for both species and <u>minimize</u> forest clearing to the extent practicable; environmental commitments further <u>minimize</u> potential impacts by imposing timing restrictions on forest clearing Development plans (including mitigation) must comply with Pinelands CMP standards |
| | Non-breeding species and Species of Special Concern (loss or diminished value of habitat) | The preferred alternatives would reduce grassland and forest habitat for resident and transient species | <ul style="list-style-type: none"> The preferred alternatives <u>minimize</u> development in grassland and forest areas to the extent practicable; environmental commitments further <u>minimize</u> potential impacts, and the <i>Grassland Conservation and Management Plan</i> <u>compensates</u> for impacts that cannot be avoided Development plans (including mitigation) must comply with Pinelands CMP standards |

Table ES-6
Summary of Key Issues and Measures to Minimize Harm

| Impact Category / Significant Issue and/or Concern | Unavoidable Adverse Impacts / Irreversible/Irretrievable Commitments of Natural Resources | Mitigation Measures / Permits and Regulatory Program Requirements |
|--|--|---|
| Wetlands | Loss or diminished value of freshwater wetlands | <ul style="list-style-type: none"> • The preferred alternatives <u>avoid</u> high quality wetlands and <u>minimize</u> impacts to low-quality wetlands to the extent practicable; In addition, the SJTA would be required to prepare a mitigation plan to <u>compensate</u> for wetland disturbances that cannot be avoided • Wetland mitigation plans must be approved by NJDEP and the Pinelands Commission; a General Permit or an Individual Permit would be required in accordance with the <i>NJ Freshwater Wetlands Protection Act Rules</i> |
| Hazardous Waste | Disturbance of CERCLA-listed waste sites | <p>The proposal involves development activities at a federally-listed Superfund site</p> <p>Areas of concern affected by the preferred alternatives have been or would be remediated prior to construction activities</p> <ul style="list-style-type: none"> • The preferred alternatives <u>avoid</u> AOCs where investigative or remedial activities are ongoing (except for AOC 6, which must be avoided until the site is approved for use); a health and safety plan, with BMPs for construction activities at hazardous waste sites, would <u>minimize</u> potential environmental risks • No permit requirements were identified; however, development-related activities involving any CERCLA waste site regardless of its status must be coordinated with and approved by the FAA's Superfund Technical Committee at ACY |
| | Disturbance of NJDEP-listed waste sites | <p>The preferred alternatives would impact two state-listed waste sites; both sites have been remediated and approved for use</p> <ul style="list-style-type: none"> • A health and safety plan, with BMPs for construction activities at hazardous waste sites, would <u>minimize</u> potential risks to human health and safety • No permit requirements were identified; development activities involving the listed sites should be coordinated with NJDEP |
| Cumulative Impacts | Incremental effects of past, present, and future actions taken by stakeholders in the study area | <p>The FAA Technical Center (which includes ACY) is a Federal installation; no stakeholder is permitted to undertake development (or remedial) action that is not compliant with NEPA (or CERCLA)</p> |
| | | <p>The FAATC, SJTA, NJANG, and USCG share this site; collectively, they cause or contribute adverse environmental effects (e.g., noise, air, and water pollution, etc.)</p> <p>Their functions are not likely to stop and could increase, so cumulative adverse effects at this site are unavoidable; however, no foreseeable or discernable significant adverse effects were identified in the FEIS</p> |

Agency and Public Involvement

One of the purposes of preparing the EIS was to include agencies and the public in the FAA's decision-making process. Therefore, agency and public coordination has been an important and ongoing activity. Section 5 of the FEIS describes the steps taken to encourage agencies and the public to participate, and it summarizes those events.

The scoping process invited agencies and the public to tell the FAA what issues should be addressed in the DEIS. Two scoping meetings were held so that the FAA could listen to these issues and concerns. Comments submitted during scoping and the FAA's responses to them are presented in the *Post Scoping Document, Appendix H* of the FEIS.

After scoping, the FAA established an Interdisciplinary (ID) Team to serve as a forum for agency coordination while the DEIS was being prepared. The ID Team, consisting of 19 agencies, met once a month for 14 months to discuss technical and administrative issues and/or to provide assistance on regulatory matters.

When the DEIS was published, nearly 100 copies were sent to 1) local libraries and township offices, 2) agencies with jurisdiction by law and/or special expertise, and 3) anyone who requested it. The FAA conducted a second public meeting (a formal public hearing this time) to discuss the proposed action, alternatives, and the environmental impacts addressed in the DEIS. Also, in response to agency comments, three additional interagency meetings were held to discuss issues and changes to be incorporated into the FEIS. All the comments received after circulating the DEIS were reviewed. Those comments and the FAA's responses to them are presented in *Appendix J* of the FEIS.

Now, the FEIS is being provided to agency officials and to the FAA's decisionmaker. Copies are also being sent to the same libraries and townships offices and to interested parties who request it. No decision regarding the proposed action may be made or recorded until 30 days after the FEIS is filed with the EPA.

The Federal Aviation Administration is the lead agency for the Federal government in the preparation of this statement.

For additional information, contact:

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Attachment 3

ENVIRONMENTAL COMMITMENTS

GENERAL REQUIREMENTS

1. All land clearing and grading activities for near-term development projects are subject to prior approval by the Commission or the New Jersey Department of Environmental Protection ("NJDEP") in accordance with the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A. Wetlands will be delineated and boundaries will be verified by the Commission.
2. All land clearing and grading activities will be confined within approved near-term development areas and grassland conservation areas.
3. All clearing and grading activities within forest, grassland, wetlands and wetland buffers will be minimized to the maximum extent practicable. All wetlands in the vicinity of the near-term projects or within the Grassland Conservation and Management Area that are not scheduled to be disturbed will be protected with fencing.
4. All grassland temporarily disturbed during construction activities will be restored using native species of local genotypes upon completion of final grading to the maximum extent practicable.
5. The limit of any land disturbance within near-term projects and the Grassland Conservation and Management Area will be fenced prior to commencement of any land disturbance activities.
6. Construction equipment, material and soil stockpile areas, and all woody debris will not be stored or disposed of within forest, grassland, wetlands or wetland buffer areas.
7. Vehicular access within grassland will be restricted to existing roads or as directed by United States Department of Agriculture ("USDA") Wildlife Services.

GRASSLAND CONSERVATION AND MANAGEMENT REQUIREMENTS

8. All grassland management activities will be performed with the advice of an Advisory Committee. The Advisory Committee shall consist of representatives from the Commission, NJ Department of Environmental Protection Endangered and Non-game Species Program, US Fish and Wildlife Service, US Department of Agriculture Wildlife Services, FAA Technical Center, and the Authority, and shall meet at a location and frequency that is mutually agreeable.
9. All grassland management activities shall adhere to a mowing plan as currently approved, or as may be periodically revised based on the recommendation of the Advisory Committee. Appropriate airport maintenance and operation staff responsible for mowing the

airfield will be required to attend an annual training program to be held prior to commencement of the winter mowing season.

10. Prior to commencement of land clearing or grading activities for construction of any near-term development project, adequate grassland creation and/or enhancement will be achieved to compensate for losses to grassland habitat from proposed development.

11. A 290-acre Grassland Conservation and Management Area will be established and managed in a manner that is conducive to the long-term conservation of the Upland Sandpiper. No development, grading or clearing activities, other than those activities associated with the establishment or maintenance of the Grassland Conservation and Management Area, shall be permitted within the Grassland Conservation and Management Area without prior authorization of the Pinelands Commission.

12. The 290-acre Grassland Conservation and Management Area will be made up of 165 acres of grassland creation and 125 acres of grassland enhancement within the area designated as Grassland Conservation and Management Area as follows:

- a. Creation of grassland habitat within pavement removal areas (15 acres), Existing barren land (7 acres), existing shrub areas (143 acres)
- b. Enhancement of existing grassland habitat (125 acres)
- c. Removal of additional 15 acres of pavement associated with reduction in Width of Runway 13-31 to 150 feet and creation of grassland habitat.

13. Within three (3) years of commencement of grassland creation and enhancement activities the following vegetation characteristics, or as amended by the Advisory Committee, shall be achieved:

| | | | |
|----|--------------------------|---------|---------|
| a. | Grass Cover | Min 60% | Max 80% |
| b. | Forb Cover | Min 10% | Max 30% |
| c. | Total Herbaceous Cover | Min 70% | Max 80% |
| d. | Shrub Cover | Min 0% | Max 10% |
| e. | Nuisance Species * | Min 0% | Max 10% |
| f. | Bare Ground | Min 20% | Max 30% |
| g. | Vegetation Height | | |
| | Mid May through Mid June | Min 10" | Max 16" |
| | June through August | Min 10" | Max 16" |

**"Nuisance" species to be mutually agreed upon by the Advisory Committee and the Authority*

14. Within the Grassland Conservation and Management Area, the Authority will create a minimum of 25 frosted elfin ovipositing plots of 0.25 acres each. The plots would include variable density coverage of wild indigo as follows: 15 plots at 10% (250 plants each); 5 plots at 20% (500 plants each); and 5 plots at 40% (1,000 plants each). The plots would include 2% low bush blueberry container-grown plants to provide additional opportunities for frosted elfin nectaring. Each plot should be located between 50 and 88 meters of the forest edge. Wild indigo seed for the "plugs" would be obtained from on-site sources so that the local genotype would be replanted. Seed will be collected from the tallest phenotype wild indigo plants.

15. Grassland habitat will be created within the 0.8 acre forest clearing resulting from 31-end ILS project to provide a minimum aerial coverage of 10% wild indigo (*Baptisia tinctoria*) and 2% low bush blueberry (*Vaccinium vacillans*). A total of 50 Staggerbush (*Lyonia mariana*) will also be planted at intervals along the forest edge.

16. All seeding and planting within the Grassland Conservation and Management Area shall consist of a seed mix and/or species composition that has been approved by the USDA Wildlife Services, NJDEP Endangered and Non-Game Species Program and the Commission. Seed mix may include depending on availability:

- a. Grasses: little bluestem (*Andropogon scoparius*), side oats grama (*Bouteloua curtipendula*), broomsedge (*Andropogon virginicus*), poverty grass (*Danthonia spicata*), purple top (*Tridens flavus*), switchgrass (*Panicum virgatum*) and deertongue (*Dicanthelium clandestinum*). Oats (*Avena sativa*) are recommended as a nurse crop.
- b. Forbs: grass-leaved blazing star (*Liatris graminifolia*), wild indigo (*Baptisia tinctoria*), butterfly weed (*Asclepias tuberosa*), wild bergamot (*Monarda fistulosa*), black-eyed susan (*Rudbeckia hirta*), partridge pea (*Cassia fasciculata*), common milkweed (*Asclepias syriaca*), Indian hemp (*Apocynum cannabinum*), narrow-leaved mountain mint (*Pycnanthemum tenuifolium*), calico aster (*Aster lateriflorus*), heath aster (*Aster pilosus*). Blazing star (*Liatris spicata*) will be selectively seeded into areas of the Grassland Conservation and Management Area that include the wetter soils.

17. All grassland creation, enhancement and restoration activities will be performed by and/or under the supervision of a firm with demonstrated experience in habitat restoration.

18. Frosted elfin (*Callophrys irus*) habitat within 50 meters of the forest edge will be preserved and maintained according to a mowing and management plan approved by NJDEP Endangered and Non-game Species Program and the Commission.

19. Prior to the commencement of land clearing or grading activities within the Grassland Conservation and Management Area, a pre-construction field survey for the frosted elfin (*Callophrys irus*) will be conducted by a qualified entomologist between May 1 and July 15 to identify areas of wild indigo (*Baptisia tinctoria*) that are used for ovipositing. All areas within

20-meters of indigo found to support ovipositing frosted elfin will be fenced prior to commencement of land disturbance. No mechanized shrub removal will be permitted within the fenced area. Shrub removal within the fenced area will be performed manually so as not to disturb indigo plants and ericaceous shrubs (specifically, lowbush blueberry, *Vaccinium vacillans* and staggerbush, *Lyonia mariana*) and dewberry (*Rubus* spp.) to the extent practicable. Ericaceous shrubs and Dewberry patches within 20 meters of protected indigo patches identified during the pre-construction field survey for frosted elfin will be retained up to a maximum of 10% coverage. Manual removal will allow for the use of small equipment such as a small backhoe for the removal of individual shrubs.

20. All grassland creation and enhancement activities will minimize disturbance to soils and retain desirable vegetation to the maximum extent possible.

21. All woody debris, including stumps, roots and shoots will be removed from grassland creation and enhancement areas.

SEASONAL RESTRICTIONS

22. All Grassland creation and enhancement activities will be performed between the period of October 1 through April 15. Shrub removal within the Grassland Conservation and Management Area will only be performed between November 1 and March 31.

23. No construction activities within grassland disturbed by near-term development projects shall commence between April 15 and August 15. All construction areas shall be fenced prior to any land disturbance or grading activities. All grass within fenced construction sites shall be maintained at no more than five (5) inches in height for the duration of construction.

24. Clearing activities within the forest is prohibited from March 1 through September 1.

MONITORING REQUIREMENTS

25. A qualified ecologist/wildlife biologist will be retained to oversee and monitor all construction and grassland creation, enhancement, restoration, management and monitoring activities to ensure adherence to these environmental commitments. The ecologist/wildlife biologist will oversee manual shrub removal to minimize disturbance to soils and vegetation. Within manual shrub removal areas, indigo plants disturbed during shrub removal will be replanted in place to the maximum extent practicable. Disturbance to Dewberry (*Rubus* spp.) within manual shrub removal areas will also be minimized to the maximum extent practicable.

26. Vegetation within grassland creation, enhancement and restoration areas will be monitored for a period of no less than five (5) years. Regular reports on the status of grassland management activities, including recommendation for corrective action if needed, shall be provided to the Advisory Committee and the FAA.

27. All development activities will be monitored for the period of construction. Regular reports on the status of construction activities, adherence with terms and conditions of approvals, including recommendations for corrective action as necessary, will be provided to the Advisory Committee and the FAA.

28. An annual grassland breeding bird species survey will be performed, including the upland sandpiper (*Bartamia longicauda*), and frosted elfin (*Callophrys irus*) surveys within the Grassland Conservation and Management Area extending for a minimum of three (3) years beyond achieving appropriate vegetation characteristics in accordance with item 13 above. Survey methodology/protocol will be developed in consultation with the Advisory Committee. The results of the surveys, including recommendations for corrective action as necessary, shall be provided in an annual report to the Advisory Committee and the FAA.

29. In consultation with USDA Wildlife Services, a program will be implemented within the Grassland Conservation and Management Area and land development areas to deter use by hazardous bird species.

FOREST PRESERVATION AREA

30. A 283-acre and 124-acre Forest Preservation Areas will be established and managed in a manner that is conducive to the long-term conservation of wetlands associated with the North Branch of Absecon Creek. No development, grading or clearing activities shall be permitted within the Forest Preservation Area without prior authorization of the Pinelands Commission. All forest management activities conducted within the Forest Preservation Area will be performed with the advice of an Advisory Committee. The Advisory Committee shall consist of representatives from the Commission, NJ Department of Environmental Protection Endangered and Non-game Species Program, US Fish and Wildlife Service, US Department of Agriculture Wildlife Services, FAA Technical Center, and the Authority, and shall meet at a location and frequency that is mutually agreeable.

