R/W 8-26 FONSI

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACT

LOCATION

Philadelphia International Airport (PHL)
Philadelphia, Pennsylvania

PROPOSED FEDERAL ACTION

Federal financial participation in and Airport Layout Plan (ALP) approval of a new 5,000 foot commuter runway (8-26) with associated taxiway improvements. Development of this runway will require the acquisition of approximately 232 acres consisting of five industrial properties, relocation of Island Avenue and Hog Island Road, relocation of four general aviation hangers and relocation of a railroad spur serving the City of Philadelphia Water Treatment Facility. Installation of a localizer, glide slope, markers and medium intensity approach lighting system with runway alignment indicator lights to serve proposed Runway 26 end is included as part of this action.

In addition, U.S. Coast Guard range lights used for navigation of the Delaware River will be relocated. The implementation of the proposed airfield improvements will require the relocation and extension of existing lighting systems associated with Runway 9L-27R, and the installation of additional centerline and runway edge lighting for Runway 17-35 and proposed Runway 8-26. The project is as generally depicted on Figure 1-2 in the EA.

PURPOSE AND NEED

The purpose of adding a new commuter runway is to segregate commuter activity from large aircraft activity. This will have the effect of decreasing delay and increasing airport capacity. In the short term, this increased capacity would reduce aircraft delay. In the long term, increased airport capacity may accommodate aviation activity levels in excess of those which can be accommodated by the existing airfield. The timing of this increase is dependent upon the rate at which the growth of aviation demand approaches the existing airfield capacity.

Philadelphia International Airport is constrained in terms of runway capacity, with resultant high levels of aircraft delay which are forecast to grow. Current (1990) delay costs airport users $119.2 million annually. This cost is forecast to increase to $220.9 million annually by the year 2000. A new 5,000 foot commuter runway (8-26) located 3,000 feet north of Runway 9R-27L is proposed to reduce aircraft delay. The runway will be used for westerly arrivals and easterly departures. The acquisition of 232 acres is needed to accommodate associated airfield development.

The data contained in the EA was compared to the existing conditions at the Airport. It should be noted that the EA presents a worse case scenario in terms of operational delays. The current operational data represents an improvement from the data that was previously prepared in the EA and Master Plan. However, it is anticipated that previous conditions may occur again.

ALTERNATIVES

Chapter 2 of the EA reviews a range of solutions to the capacity and delay problems at PHL, indicates why certain solutions were rejected as unreasonable, identifies the viable alternatives and evaluates each viable alternative in terms of effectiveness, feasibility and impacts. In addition to the No Action Alternative, six alternatives were considered. Alternative 6 - Acquire land and construct commuter runway 8-26 3,000 feet north of Runway 9R-27L was chosen as the preferred alternative.

Table S-1 in the EA shows a summary of impacts, aircraft delay reduction and cost for each alternative.

The following Impact Analysis presentation outlines the highlights of the more thorough analysis contained in the EA which is made a part of this Finding. All Figure and Table numbers refer to those appearing in the EA.

IMPACT ANALYSIS

NOISE

A noise analysis was conducted using FAA's Integrated Noise Model (INM) Version 3.9 for existing conditions in the year 1990 and forecast conditions in the years 1998 and 2005 at PHL. The INM analysis produced equal noise exposure contour

lines for 65, 70 and 75 average annual Day/Night Noise Levels (DNL). These contours compare the noise impacts of each alternative with Alternative 7, No Action.

The forecast years 1998 and 2005 were selected for the noise analysis because they represent the future years when the greatest impact is expected to occur. The year 1998 is the first year in which the proposed project is expected to be fully operational. The forecast used for 1998, both with and without project elements, is an unconstrained forecast. At a certain point, delays will reach unacceptable levels, which will then begin to affect the growth of aviation activity at PHL. This constraint will eventually result in an unmet demand. The 1998 analysis illustrates the effects of changing flight paths while a substantial number of older and noisier aircraft remain in operation. The year 2005 analysis shows the effect of any increased aviation activity permitted by the alternative. The year 2005 is the estimated time at which airfield delay would reach unacceptable levels with all identified improvements. The year 2005 fleet mix has none of the noisier Stage 2 aircraft resulting in less noise impact for every alternative.

Consequently, the year 1998 best illustrates the potential noise impact of the alternatives.

As described in Section 2.2, the 1998 DNL contours are larger than the year 2005 contours for every alternative. Consequently, comparisons of populations within the noise contours are based on the 1998 contours. Noise impacts were also examined using the INM to produce spot readings of noise, or grid point analyses, for 22 locations around PHL (see Figure 3-3). These grid point analyses show the noise impacts of each alternative for the years 1998 and 2005.

Figure 4-6 shows the 1998 noise contours associated with The Proposed Action (Alternative 6). Figure 2-23 compares the 65 and 75 DNL contours for 1998 with the No Action alternative. The 65 DNL contour for Alternative 6 encompasses an area of approximately 10.8 square miles. Total population within the 65 DNL contour would include approximately 1,705 people. There is also one church located within the contour. Additionally, Fort Mifflin is located within this contour and has been considered in this analysis. There are no noise sensitive receptors located within the 75 DNL contour.

Figure 2-24 compares the 65 and 75 DNL contours for 2005 with the No Action alternative. The 65 DNL contour for Alternative 6 encompasses an area of approximately 8.3 square miles while the 75 DNL contour encompasses an area of approximately 1.6 square miles.

Calculated noise levels for 1998 and 2005 at 22 sites around PHL are presented in Tables 4-7 and 4-8. In 1998, 13 of the 22 sites would experience lower aircraft noise levels with the proposed Alternative 6 than with the No Action Alternative. Two sites would experience the same level of noise under either alternative. No noise sensitive area would experience a significant increase in aircraft noise. FAA's threshold of noise significance has been determined to be a DNL 1.5 dB or greater increase in noise over any noise sensitive area located within the DNL 65 dB contour.

In view of the calculated noise levels for 1998 and 2005, it can be concluded that the Proposed Action will not create a significant noise impact.

COMPATIBLE LAND USE

Compatibility of land uses in the vicinity of an airport is generally associated with aircraft noise levels. Under FAR Part 150 guidelines, areas of non-compatible land use include residential areas within the DNL 65 dB contour. As noted, the 1998 noise contours represent the greatest impact. No additional non-compatible uses are expected to be developed in the future. For each alternative, the year 2005 contour will be considerably smaller than the year 1998 contour, thereby reducing the impacted areas. Changes in population distribution are not expect to occur due to the nature of the matured established community surrounding PHL.

Residential areas within the airport environs include Philadelphia Naval Yard housing to the east of the airport, and the communities of Lester and Essington located in Tinicum Township immediately to the west of the airport. All of these residential areas are affected by aircraft operations on the airport's parallel air carrier runways (Runways 9-27 L and R). The community of Eastwick, located to the north of the airport, is affected by operation on Runway 17-35, the airport's crosswind runway, which is principally used by commuter and general aviation aircraft. Another noise sensitive use is historic Fort Mifflin, a national landmark located immediately to the east of the airport. Impacts on Fort Mifflin are discussed in the EA and this Finding.

Figure 2-23 compares the 1998 noise contours for Alternative 6 with the No Action Alternative. Non-compatible land use in Eastwick would decrease slightly due to the diversion of some Runway 17-35 traffic to proposed new Runway 8-26. Non-compatible land use would increase slightly in the Philadelphia Navy Yard, and would decrease slightly in Tinicum Township. Noise levels at Fort Mifflin would be slightly reduced. No non-compatible land use would be created in the New Jersey communities lying across the Delaware River.

Marinas located in the vicinity of the airport tend to be used only seasonally (3 to 6 months a year). In addition, user tend to spend a minimal amount of time in the marinas. The primary purpose of thse facilities is the transfer of people from land to watercraft. As such, time spent within the DNL 65dB contour is minimal. Therefore, marinas can be considered as commercial use and are compatible within this contour.

As such, no significant changes to land use are expected as a result of this action.

SOCIAL IMPACTS

Implementation of the proposed development can be accomplished without the need to relocate any existing residences or divide or disrupt any established communities. However, construction of proposed Runway 8-26 will result in the need to acquire all or portions of sixteen properties in the Penrose III development just east of the airport, and the relocation of five light industrial/warehouse facilities. These businesses occupy approximately 52 acres. The remaining property to be used for the new runway is already owned by either the City of Philadelphia or the Philadelphia Industrial Development Corporation.

In light of the quantity of vacant or under-utilized industrial space in the City of Philadelphia, the relocation of those businesses located in the Penrose III development area is not expected to be difficult. Citing the availability of 98.9 acres of vacant industrial property in the Eastwick, Stage "A" development area, and an additional 42.1 acres in the Eastwick, Stage "B" development area, the Philadelphia Industrial Development Corporation has indicated that it would be feasible to relocate these businesses to sites within a few miles of their present location, further minimizing any adverse impacts.

Relocation assistance would be provided to the owners and tenants of all property acquired in the project area for the implementation of this project by the appropriate City agencies in cooperation with the FAA in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

Included in the area to be acquired are portions of the Island Avenue, Hog Island Road, and Envoy Avenue rights-of-way, as well as a railroad spur which serves the nearby City of Philadelphia Water Treatment Facility and State of Pennsylvania Liquor Control Board Warehouse. The construction of the proposed new commuter runway will require the abandonment of portions of the Island Avenue and Envoy Avenue rights-of-way. Island Avenue is the major access route to areas south of the airport. In order to maintain access to these areas following the abandonment of Island Avenue, the Hog Island Road right-of-way will be realigned and shifted easterly to a position adjacent to the end of Runway 26. North of Runway End 26, the realigned Hog Island Road will extend westerly and northerly to a signalized intersection with Enterprise Avenue.

Realigned Hog Island Road will be located in the Extended Runway Safety Area (ERSA) of Runway 8-26. As a result, it will be necessary to raise the threshold of Runway 26 to an elevation of 36 feet above MSL, and construct a tunnel under the ERSA to encapsulate the road.

The railroad spur located immediately adjacent to the west side of Hog Island Road will be severed by proposed Runway 8-26. A new rail spur will be provided on the north side of realigned Hog Island Road in order to maintain rail service to these facilities. The new rail line will be located in the Runway Protection Zone of Runway 8-26 and will be enclosed in the same tunnel as the realigned Hog Island Road right-of-way.

The acquisition and relocation of those light industrial/ warehousing facilities currently served by the affected portions of the Island Avenue and Envoy Avenue rights-of-way will minimize the potential adverse impacts the abandonment of these rights-of-way will have on businesses located in the area. As a significant portion of the traffic generators located along these rights-of-way will be relocated, the need for these rights-of-way to be preserved similarly decreases. Therefore, the overall impact of the proposed development on existing patterns of surface transportation in the area is expected to be minimal.

The Proposed Action would reduce aircraft delay, thus allowing more activity for a given acceptable level of delay. To the extent that passenger demand at PHL increases as a result of the proposed development, airport-related employment is likely to increase.

In summary, the implementation of the proposed airfield development is not expected to impose significant changes in the social environment.

AIR QUALITY

On March 2, 1994 the FAA issued a Determination of Conformity under Section 176(c) of the Clean Air Act, as amended in 1990. The Determination was based on the air quality analysis presented in the EA and concluded that implementation of this project will not result in any adverse impact upon air quality in the study area. As such, the Proposed Action would not cause or contribute to any new violation of air quality standards, increase the frequency or severity of an existing violation, or delay attainment of any standard.

The complete Determination is attached to and made a part of this Finding.

WATER QUALITY

Philadelphia International Airport overlies the New Jersey Coastal Plain Aquifer System, recognized by the U.S. Environmental Protection Agency (Federal Register, 1988) under the Clean Water Act to be the "sole or principal source of drinking water" for much of central and southern New Jersey and that "the aquifer, if contaminated, would create a significant hazard to public health."

Pursuant to section 1424(e) of the Safe Drinking Water Act, as amended, consultation with the U.S. EPA must be undertaken if there is the potential for contamination of an aquifer as a sole or principal drinking water resource for the area. Accordingly, the EPA reviews all federally-assisted projects located within the New Jersey Coastal Plain Aquifer System to ensure that the projects do not create a significant hazard to public health. The generalized stratigraphy of subsurface materials in the vicinity of the airport and the geohydrology of the aquifer system are discussed on Page 3-31.

A portion of the proposed new commuter Runway 8-26 and an associated parallel taxiway is to be constructed on top of the Enterprise Avenue Landfill (see Figure 4-8). The Landfill, is a delisted EPA "Superfund" site and encompasses 87 acres, 40 of which have been filled by the City of Philadelphia during the period from 1971 through mid 1976. Fill material consisted largely of incinerator residue, fly ash, and construction debris, but it was reported that chemical wastes were also dumped. The City conducted exploratory excavations in 1979 to investigate this concern. Approximately, 1,700 drums of industrial waste, principally paint sludge, solvents, oils, resins, metal finishing wastes, and solid inorganic wastes, were discovered. In 1983 the City began a clean-up procedure which concluded with a low permeability soil layer or "clay cap" being constructed to cover the site and minimize vertical water flow through possible residual contaminants, thus protecting the underlying aquifer.

At the request of the U.S. EPA and the Pennsylvania Department of Environmental Resources (DER), the City of Philadelphia and the Airport Authority have undertaken an extensive groundwater testing and analysis program at the site of the old Enterprise Avenue Landfill over which the new runway will be located. The program is designed to assure the continued viability of the major cleanup effort the City undertook in the early 1980's. This program is being guided by a "Workplan for Hydrogeological and Geotechnical Investigation at the Enterprise Avenue Landfill." The program also serves the EPA in its 5 year review of the remedial action taken at the Landfill under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA); EPA's review is being performed simultaneously with the New Jersey Coastal Plain Sole Source Aquifer review. The specific details of the monitoring and testing efforts by the City can be found in the "Workplan" (Volume I & II dated August 24, 1994).

EPA has concluded that the EA and supporting documentation indicates the environmental effects of this proposed airport expansion are potentially significant. The submitted Geotechnical Report recognized the potential for such a significant impact, and proposed a monitoring and mitigation plan. EPA has reviewed this plan and found the proposed actions would afford inadequate protection to the new Jersey Coastal Plain Aquifer System. However, EPA believes that this proposed monitoring and mitigation plan can be supplemented and amended in such a way that with mitigation, the environmental effects of this proposed airport expansion can be reduced to less-than-significant levels.

Therefore, EPA has formulated special conditions to amend the proposed monitoring and mitigation plan. These conditions are designed to minimize the risk of contaminants still contained within the Enterprise Avenue Landfill migrating either laterally through the landfill or downward through the confining layer, both during and after construction of the proposed airport expansion. Due to the unique nature of this project and uncertainties inherent in constructing over a landfill, EPA believes the special conditions are necessary and appropriate. The direct incorporation of these conditions into a "mitigated FONSI", and compliance with such conditions would adequately reduce the possibility that this proposed action would have adverse effects on human health and the human environment.

With the additon of these special condition, (see Mitigation Measures) EPA supports the issuance of a mitigated FONSI for this proposed airport expansion.

These special conditions are made a condition of this Finding and will become conditions of and Federal grant for this project. FAA fully anticipates that all appropriate meaures will be implemented as outlined in these special conditions before initiation of any construction activities, throughout the construction phase, and after this proposed development is completed. EPA remains committed to continuing to work with the Airport to insure that this proposed project can be completed in a manner that protects all aspects of human health and the environment.

Of a more general nature is the condition of the existing clay layer which guards the lower aquifer from any potential contaminants above. This impervious clay layer provides a 25 to 60 foot thick barrier between the old landfill site and the sole source aquifer. The depth and composition of the barrier, verified for the first time as part of the City's investigation, provides long-term assurance that the old Enterprise Avenue Landfill poses no danger to the sole source aquifer below, now or in the future.

Even though the evidence resulting from the City's extensive investigation indicates no perceptible danger to the aquifer arising from the old landfill, the monitoring and testing program is scheduled to continue throughout the proposed runway construction and for several years after while the runway is operational. A second round of testing, of the same magnitude as the first, is scheduled to begin immediately. These results will be available for review and study before any construction is scheduled to start.

Safeguards have been taken to assure that the proposed action will not have an adverse affect on the aquifer beneath it. In fact, the City's investigation has produced valuable information that will allow the runway to be designed to provide additional safeguards to the aquifer that would not exist without it. Prior to construction, plans call for a flexible neoprene cover to be placed over the entire site adding an additional flexible guard to the thick clay layer already provided. On top of that cover, 15 to 30 feet of additional clean embankment soil will be added before the runway is built.

The existing cap will not be penetrated during construction of the runway and associated airfield improvements, except as may be required to dewater during surcharge. Any dewatering well drilled through the cap will be filled with concrete to seal the well following surcharge. Any contaminated water will be treated and disposed of in accordance with all federal, state and local regulations. The U.S. EPA must approve construction procedures and monitor construction affecting the clay cap.

Construction of the proposed airfield improvements would result in potential short-term impacts upon water quality and the volume of surface water runoff. The net increase in impervious surfaces associated with development of the proposed action compared to the No Action Alternative is approximately nine (9) percent. The increase in runoff has the potential to impact water quality. However, the new drainage system designed in accordance with the Pennsylvania Stormwater Management Act, PL864, N167, and in compliance with National Stormwater Permitting, will prevent adverse water quality impacts.

Temporary and permanent erosion will be controlled by strict adherence to FAA Advisory Circular 150/5370-7, "Airport Construction Controls to Prevent Air and Water Pollution." These measures, including the use of such controls as sediment basins, berms, diversion ditches, sodding and mulching, will be incorporated into all project plans and specifications.

In view of the above conditions, which are made a part of the Finding, the proposed action is not expected to cause significant water quality impacts.

HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL AND CULTURAL RESOURCES

Consultation under Section 106 of the National Historic Preservation Act of 1966 and under the Archeological and Historic Preservation Act of 1974 was conducted with the Advisory Council on Historic Preservation (ACHP), the Pennsylvania Historical and Museum Commission (SHPO), the Philadelphia Historical Commission, the National Park Service and with Historic Fort Mifflin. Based on this consultation, a Memorandum of Agreement (MOA) was prepared for the Proposed Federal Action and was executed by the ACHP, the SHPO, the City of Philadelphia, Division of Aviation (concurring party) and the FAA. The MOA is attached to and is made a part of this Finding.

It is noted that the Proposed Federal Action as defined by the MOA differs from the Proposed Federal Action defined by the EA and this Finding. The EA and this Finding's Federal Action involves proposed Runway 8-26 and all related, connected and similar activities. As requested by the attached ACHP letter of January 27, 1994, a "Programmed Memorandum of Agreement" was developed which includes all proposed development within a 20 year time frame shown on the proposed revised Airport Layout Plan (ALP). The ALP includes development such as the west-side perimeter road, a Marriott Hotel and a UPS apron expansion that is unrelated to the runway 8-26 project in geography or timing. Separate environmental analysis and federal findings will be made for these projects when they become ripe for decision. Further reference to "Proposed Federal Action" in this section will apply to this Finding's proposed Federal Action.

A cultural resources assessment of the area of impact of the proposed Federal Action was conducted after consultation with the SHPO and Philadelphia Historical Commission. The assessment concluded that Historic Fort Mifflin was the only recorded historic or pre-historic resource found within the project limits.

A City of Philadelphia, Division of Aviation, on-airport building inventory found four structures that would be impacted by the proposed Federal action. These structures are corporate hangars which the SHPO previously determined were not eligible for inclusion on the National Register of Historic Places. Five active businesses in an industrial area to the east of the existing airport property line are to be acquired and demolished as a result of the proposed Federal action. These properties are not accessible to the sponsor in order to conduct an evaluation of historic or

architectural significance. An evaluation of significance will be conducted after property acquisition but prior to construction. Consultation with the SHPO and any further investigations which the SHPO determines to be necessary, will be completed prior to the initiation of construction activities affecting those structures. This consultation is provided for in stipulation "A" of the MOA.

None of the off-airport historic sites identified on pages 3-22 through 3-25 are within an area where there is a noise increase from the baseline contours to the proposed action contours. The comparative noise contours are shown on Figures 2-23 and 2-24. In addition, the proposed Federal action is not likely to introduce flight operations to any of the identified historic sites that do not currently experience aircraft overflights.

Historic Fort Mifflin is designated as a National Historic Landmark and is included in the National Register of Historic Places. The proposed Federal action would have an effect on the fort by removing an off-site parking lot used for special occasions, by slightly altering the entrance road to the fort, and by modifying road drainage patterns that may impact the fort's moat. Consultation with the ACHP, the SHPO, and Historic Fort Mifflin was conducted and the criteria of adverse effect (36 CFR Part 800.3(b)) were applied. It was determined that the action would have an adverse effect on Historic Fort Mifflin. Stipulations "C", "E" and "F" of the MOA apply to the mitigation of these adverse effects.

At the request of the Philadelphia Historical Commission, historic shoreline mapping of the airport area was conducted. The mapping shows that the new runway is situated in the vicinity of what was once the back channel of the Delaware River. As is noted on Pages 3-25 and 3-26, the mapping did not show any settlements or structures in the area and states that the area was probably unsuitable for permanent habitation due to extensive marshlands. The area on which the proposed Federal Action is to be developed has been significantly disturbed in the past. The current land uses for the area include a former superfund site (Enterprise Avenue landfill), five industrial properties, a dredged material disposal site, transportation rights-of-ways, a car impoundment yard and some undeveloped lots built on fill.

The historic resource agencies asked that any core borings taken in the area of the runway construction be interpreted by a geomorpholgist and by an archeologist. In addition,

the SHPO requests a Phase I resources survey of Mingo Creek and of the borrow sites. Provisions for core borings and for Phase I and Phase II surveys are included under Stipulation "B" of the MOA.

Based on the findings of the consultation with the historic resource agencies and the degree to which the area to be impacted by the proposed Federal Action has been previously disturbed, it is the FAA determination that it is not likely that the proposed Federal Action will have an adverse effect on historic, archeological, architectural or cultural resources that cannot be adequately mitigated. Except for the historic shoreline mapping, no evidence has been provided or uncovered that would indicate the presence of potential significant historic, archeological, architectural or cultural resources. The shoreline impacted appears to be the back channel and not the main channel or ship turning areas of which the resource agencies expressed concern. In addition, this shoreline has been significantly modified and filled over the years.

DEPARTMENT OF TRANSPORTATION (DOT) ACT, SECTION 4(F)

A review of the identified historic sites in the project area was conducted for the purpose of determining noise and construction-related impacts from proposed airfield improvements and whether such impacts would require the "use" of property addressed in DOT Section 4(f).

Two sites, Fort Mifflin and the "Cannon Ball" house at Fort Mifflin, are the only historic resources that may be affected under the alternatives. Due to the close proximity of these two historic properties (facing one another on opposite sides of the street) they are treated as one Fort Mifflin entity for the analysis of impacts.

Potential impacts associated with the new commuter Runway 8-26, as it relates to the Fort Mifflin site, were assessed from the standpoint of aircraft noise, vibration, wake turbulence/wind gusts, air quality, fuel dumping, visual impacts, roadway relocations, parking/access, drainage and flooding.

In terms of water supply to the Fort's moat, groundwater, and drainage patterns, the Proposed Action would not result in any adverse impacts to Fort Mifflin (see MOA stipulations

"C", "E" and "F" as they apply to mitigating any Section 106 "adverse effect" on Historic Fort Mifflin). In terms of noise, wind gusts, air quality and visitor access, the Proposed Action would have a beneficial impact.

WETLANDS

The proposed new commuter runway would be sited to the east of the existing airport in a largely undeveloped (although disturbed) area supporting the greatest diversity of wetland types, referred to in the EA as the east end wetlands. At this location, the runway would involve a total of 9.0 acres of wetlands.

Opportunities for on-site wetlands creation or enhancement are limited due to the limited availability of suitable sites and the concern for waterfowl habitat creation in close proximity to airport operations. However, since the majority of the impacted wetlands are drainage channels which make up the local surface water drainage system, their reestablishment was investigated. Under the Proposed Action, the area and length of a new channel significantly exceeds the original totals, thereby providing opportunity to more than offset the loss of the impacted wetland area. The Airport Authority is committed to the establishment of both on and off wetland site mitigation. A mitigation measure to this effect has been made a part of this Finding.

FLOODPLAINS

Flood Insurance Rate Maps of the area surrounding Philadelphia International Airport reveal that virtually the entire airport is located within the limits of the 100 year floodplain.

To the extent that development within a floodplain cannot be avoided, the adverse impacts of such development must be mitigated by adherence to special flood-related design criteria, elevation of the development above base flood levels, and minimization of the amount of fill placed in the floodplain.

Construction of the new commuter runway will require the placement of over one million cubic yards of fill material within the one-hundred year floodplain, and will raise the surface elevation of the runway by 36 feet (42 feet above Mean Sea Level). The placement of this fill may increase the amount and rate of stormwater runoff discharged from the

airport towards the Delaware River to the south and Mingo Creek to the north, and could constrict or otherwise alter the flow of flood waters during bank overflow conditions.

The new runway would not be located within the floodway (or velocity) portion of the floodplain. However, it should be noted that the Airport is situated along the tidal portion of the Delaware River, where principal flooding effects of major storm events are from tidal flow which far exceeds downstream flows. With the absence of a riverine floodway, the backwater flooding effects more typically associated with riverine systems are not applicable in the vicinity of the Philadelphia Airport.

Assistance in the determination of adverse impact on the floodplain which could result from the proposed development activity at the airport has been requested of the Federal Emergency Management Agency. A flood hazard determination for the development of the area was also requested of the U.S. Army Corp of Engineers. Discussions with the Corps of Engineers Floodplain Management Branch indicate that the proposed airfield development would not be expected to result in adverse impact on the floodplain. This conclusion is due to the nature of the project, its location within the floodplain, and the tidal nature of the floodplain in this area. These considerations are briefly summarized below:

- Airfield development would not entail construction of human-occupied structures in floodways, and the airfield paving elements of the project can readily incorporate flood-related design criteria.

- Airfield development, notably the proposed new commuter runway, would not be located in the floodway.

- The Delaware Valley floodplain is tidal rather than riverine in this area. Given the already-developed nature of this floodplain and the extent of the floodplain, the effect of proposed airfield development on floodwater levels would be minimal.

Discussions with representatives from the City of Philadelphia, the Pennsylvania Department of Environmental Resources and the U.S. Army Corps of Engineers indicate that no impoundment of water is likely to occur as a result of the proposed construction. Therefore, the impact the proposed development will have on the flow of waters during bank overflow is not expected to be significant.

The construction of any obstruction which affects a waterway or body of water, or its 100 year floodway, requires a Water Obstruction Permit from the Pennsylvania Department of Environmental Resources, Bureau of Dams and Waterway Management. Other permits required prior to the implementation of the proposed airfield development program will be identified in consultation with the U.S. Army Corps of Engineers, the Federal Emergency Management Agency, the Pennsylvania Department of Environmental Resources, and other regulatory agencies. Such permits are likely to include a Soil Conservation Permit from the State Soil Conservation Office, a Soil Erosion and Sedimentation Control Plan and Permit from the Pennsylvania Department of Environmental Resources, a Section 401 Water Quality Permit, and a National Pollution Discharge Elimination System Permit. Many of these permit requirements are discussed more fully in the Water Quality section (4.6).

The Corps of Engineers Floodplain Management Branch will review the proposed project during the Corps of Engineers Section 404 permitting process. The Environmental Review Office of the Philadelphia Planning Commission will be responsible for applying for necessary permits, on behalf of the City of Philadelphia, through the Philadelphia Regional Office of the Pennsylvania Department of Environmental Resources.

The Proposed Action will comply with all applicable flood regulations of the City of Philadelphia and the Federal Emergency Management Agency. It is anticipated that the U.S. Army Corps of Engineers will require that any damageable facilities be constructed above the 100 year flood level, and that the storage of aviation and jet fuel be restricted to areas above the 500 year floodplain.

OTHER IMPACT CATEGORIES

The potential impacts of the proposed Federal Action on biotic communities, threatened and endangered species, coastal zone management program, coastal barriers, wild and scenic rivers, prime and unique farmlands, energy supply and natural resources, light emissions, solid waste, bird hazards, construction and cumulative impacts and other impacts were evaluated in the EA. It is FAA's finding that the Proposed Action will not have significant affect on any of the above noted categories.

PUBLIC INVOLVEMENT

In addition to resource agency coordination, active public participation has been an integral part of the Environmental Assessment for proposed airfield improvements at Philadelphia International Airport. The public consultation process has been accomplished through a series of Advisory Panel meetings and four public information meetings. Consultation with relevant agencies and other interested parties was conducted continuously during the development of the Draft Environmental Assessment.

Written and verbal public comments were received from the outset of the project through publication of the Draft Environmental Assessment. Comments and responses received after publication of the Draft EA are contained in Section A.5 of Appendix B-2 of the EA.

Three public hearings on the Draft EA were held in September, 1992. Notice of the hearings was published on August 24, 1992, and several times subsequent thereto in four Philadelphia area newspapers and two New Jersey papers. The public hearings were held 30 days after the Draft EA was made available for comment on August 18, 1992. Comments and responses are also contained in Section A.5.

MITIGATION MEASURES

The following measures are conditions of this Finding and will become conditions of any Federal grant for this project.

1. Relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

2. The Sponsor will obtain an Air Quality Certification from the Commonwealth of Pennsylvania prior to the issuance of a federal construction grant.

3. All land clearing fugitive dust will be kept to a minimum and open burning of debris will conform to state and local regulations.

4. The Sponsor will obtain a State Water Quality Certification from the Commonwealth of Pennsylvania prior to issuance of a federal construction grant.

5. Temporary and permanent erosion will be controlled by strict adherence to FAA Advisory Circular 150/5370-7, "Airport Construction Controls to Prevent Air and Water Pollution." These measures, including the use of such controls as sediment basins, berms, diversion ditches, sodding and mulching, will be incorporated into all project plans and specifications.

6. Standard air and water quality protection measures will be employed during construction in accordance with FAA Advisory Circular 150/5370-10A, Item P-156. Clearing and grubbing will be conducted in accordance with Item P-151, except where superseded by special conditions included in permits issued for this project.

7. The Memorandum of Agreement attached to this Finding regarding Historic Fort Mifflin will be adhered to at the time the proposed action is implemented.

8. All plans to mitigate any wetland loss will be coordinated with all interested federal, State and Local regulatory agencies. In this regard, the sponsor shall obtain, and adhere to all requirements of a Section 404 Permit issued by the Corps of Engineers. Any unavoidable wetland loss shall be mitigated at a minimum of a one-to-one replacement ratio prior to issuance of a federal construction grant. Mitigation for the unavoidable wetland losses associated with the new runway project should include habitat replacement and enhancement for the wetland-dependent Species of Special Concern identified by the Pennsylvania Game Commission (PGC). The PGC should be included in mitigation planning activities for this project, in addition to the regulatory permit agencies.

9. A new drainage system will be designed in accordance with the Pennsylvania Stormwater Management Act, PL864, N167, and in compliance with National Stormwater Permitting.

10. A National Pollutant Discharge Elimination System (NPDES) permit will be acquired by the sponsor prior to undertaking any work associated with the disturbance of wetlands or which may impact the quality of water in the area surrounding the airport. Additionally, as part of the NPDES process, the sponsor shall develop a Stormwater Pollution Prevention Plan.

11. The sponsor shall comply with all applicable flood regulations of the City of Philadelphia and the Federal Emergency Management Agency upon implementation of the action. Additionally, all damageable facilities shall be constructed above the 100 year flood level and the storage of aviation and jet fuel will be restricted to above ground areas above the 500 year floodplain.

12. The EPA special conditions to amend the proposed monitoring and mitigation plan for protection to the New Jersey Coastal Plain Aquifer System shall be adhered to as outlined in the attached EPA letter of September 16, 1994, which is made a part of this finding.

CONCLUSION AND APPROVAL

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act of 1969 (NEPA) and that it will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(c) of NEPA.

APPROVED: Anthony P. Spera _____ 9/22/94

Anthony P. Spera, Acting Manager — Date
Airports Division, AEA-600

DISAPPROVED: _____ _____

Anthony P. Spera, Acting Manager — Date
Airports Division, AEA-600

Attachments