

CHAPTER TWO PURPOSE & NEED

Project Purpose Statement – To examine the air traffic actions recommended in the 1999 Noise Compatibility Program (NCP) Update as a means to further reduce noise impacts and examine the proposed increased use of an alternate procedure in a safe and efficient manner consistent with current and proposed air traffic operations at T.F. Green Airport (PVD).

The FAA issued a Record of Approval on the NCP on June 15, 2000. It is included in this document in Appendix G.

The Federal Aviation Administration (FAA) and the Rhode Island Airport Corporation (RIAC) jointly prepared this Environmental Impact Statement (EIS), in accordance with the provisions of the Council on Environmental Quality (CEQ) Regulation 40 CFR 1506.2 which directs Federal agencies to cooperate with state and local agencies to the extent possible to reduce duplication. These actions, which are the subject of this EIS, are specifically required to respond to the need for the proposed noise abatement and airspace changes at T.F. Green Airport.

2.1 PURPOSE AND NEED

In recognition of the existing and projected changes in aircraft and passenger activity at T.F. Green Airport, RIAC outlined several basic goals and objectives to guide the long-range planning of the airport. These goals and objectives were addressed in the 1999 NCP Update analysis.

The NCP Update analyses focused on these objectives to formulate an economically feasible and implementable plan that would provide for compatibility between aircraft noise impacts and the community.

T.F. Green Airport is operated by RIAC. It is located in Warwick, Rhode Island, and provides commercial air service for the state of Rhode Island and communities in southeastern Massachusetts and northeastern Connecticut. The airport is an essential transportation resource for New England and specifically the state of Rhode Island, as well as communities as far away as Boston, Massachusetts. It provides a safe and convenient connection to the air transportation system for those communities, and connects the region to the global economy.

The character of the airport has matured, airlines have begun new service, and the projected activity levels have continued to show growth. There has been a general trend of increased aircraft operations at T.F. Green Airport for the past several years. Based on current Airport Traffic Control Tower (ATCT) data, the total number of aircraft operations in 1998 was 156,141. Total operations are forecasted to reach 193,900 by 2003. This represents a 24.18 percent increase in total aircraft operations at T.F. Green Airport. It is important to note that growth can represent a need for air traffic noise abatement procedures to offset the effects generated by the increased activity. The amount of flight activity, for example, affects the noise environment of an airport.

Similarly, the changing character of an airport can vary the requirements placed on the air traffic and airspace systems. The peaking characteristics of an airport places demands on these systems and pushes their ability to process a large number of aircraft in a relatively short period of time. The efficiencies of the airspace and control system are increasingly important variables which influence the noise dispersion patterns and the routing of aircraft.

In an effort to explain the operational requirements of the existing airfield, representatives from the T.F. Green ATCT provided input to the NCP Update process. The primary goal of their input was to provide guidance to the NCP Technical Advisory Committee (TAC) by relating the abilities and limitations of the airport's present configuration. The 1999 NCP Update¹ presents existing and forecast baseline noise conditions and includes air traffic noise abatement actions that are to be assessed in this EIS.

Similarly, in response to user requests, the FAA is proposing to increase the utilization of an east coast SWAP route for departing flights to the Baltimore-Washington Airport (BWI) that also must be assessed in this EIS. This route will provide an alternate procedure during those times when the New York Air Route Traffic Control Center (New York Center) has congested airspace and requires some departures to hold on the ground. It is expected that between 18 and 22 aircraft (depending on the year discussed) would use this alternate procedure on an average day. Increased use of the SWAP route has a slight effect on the location of the noise exposure contours in the airport vicinity; therefore its implementation by ATCT requires this analysis.

The noise abatement air traffic actions proposed in the NCP Update and this EIS are developed to minimize noise for populations within the 65 DNL or greater noise contours, and to some extent those areas beyond the contours. This focus requires a study area be established which encompasses the areas that will clearly be the most impacted by aircraft noise resulting from the actions. There will be indirect effects outside the study area resulting from aircraft overflights. There are no significant cumulative impacts outside the study area as a direct result of the noise abatement actions.

The study area established for this EIS encompasses the most impacted regions close to the airport, as well as some of the regions that currently, and in the future, will have aircraft overflying them. The study area is shown in Chapter Four, Exhibit 4-1. The Federal purpose and need for the air traffic actions, and the time frame for them are discussed below.

Purpose

The purpose of the proposed Federal action is to address the following needs in a comprehensive, integrated plan for improvement. The following sections present the two Federal actions followed by a discussion of the needs they fulfill.

¹ *T.F. Green Airport NCP Update, Final*, August, 1999, prepared by Landrum & Brown, Incorporated.

Federal Action: The approval and implementation of the NCP Air Traffic Noise Abatement Actions***The need to improve the noise environment while maintaining safety margins and requirements.***

After a detailed analysis of existing conditions, the 1999 NCP Update for T.F. Green Airport determined that, in order to maximize the noise abatement potential, it would be advantageous to better delineate the flight tracks/corridors of departing and arriving aircraft. The airport currently has adequate airfield and airspace procedures to accommodate the activity levels, but there is an opportunity to enhance them for noise purposes.

As shown in **Exhibit 2-1**, the majority of the current noise patterns at T.F. Green Airport are primarily centered around Runway 5R/23L. The noise contours reflect more frequent departure and arrival flow to those runway ends. The contour shape also reflects that the arriving and departing aircraft are primarily straight-in or straight-out from the runways for two to three miles from Runway 5R/23L. From Runway 16/34 the contours are again primarily straight-out from the runway ends, but they are smaller. They only extend approximately 8,000 feet from the runway ends.

The need to provide for user's and neighbor's needs.

The purpose of the NCP Update is to provide operational and land use noise abatement/mitigation options for RIAC to utilize for the benefit of the airport's neighbors while maintaining operational integrity. The first action proposed in this EIS is the use of noise abatement flight corridors to route departing and some arriving aircraft away from incompatible lands near the airport. These procedures have been tested by the ATCT and in general found to be operationally achievable.

The need to provide a plan for the airport to continue to operate and meet demands while mitigating noise exposure to the greatest extent possible.

The update of the NCP provides an opportunity for the airport to plan how it will continue to meet the operational demands of the flying community while providing the best noise mitigation alternatives to the public.

Implementation of the measures recommended in the NCP Update would abate and mitigate the impacts of aircraft noise for both the existing and projected future conditions. A detailed discussion and list of the proposed measures is provided in Chapter Five, *Environmental Consequences*.

Federal Action: Increased SWAP route departures to BWI***Provide reduced delays during peak operating periods in the New York area.***

Currently, most commercial jet aircraft departing T.F. Green Airport for BWI are routed to the Putnam, Connecticut departure fix, and eventually through the New York area. Oftentimes, this route incurs delays because of air traffic congestion or weather conditions in the New York area. This forces departing aircraft to wait on the ground during these delays. A SWAP route exists for aircraft going to BWI, but it is limited to those times when weather is the primary delay factor. The SWAP route takes aircraft south of the airport and along the east coast of the United States. They utilize the same noise abatement flight corridors.