

PREFACE



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The impact of aircraft noise on airport neighbors has been a major environmental issue in the United States for many years, particularly since the introduction of jets to the civilian aircraft fleet. At the same time, noise impacts from other sources also have increased commensurately with the growth of our urban areas. Adverse effects of noise--from all sources--must be dealt with positively.

Without proper planning, the continued growth of aviation and the urban areas which it serves cannot take place without the risk of conflicts. Noise compatibility planning is the key step in reducing and preventing such conflicts at Sky Harbor International Airport. The noise compatibility plan will explore a wide range of options available so that public officials can determine how the airport can meet the increasing demands

placed upon it while, at the same time, fulfilling the role of being a good neighbor to nearby residents and other land users.

An even greater challenge, where portions of the airport environs are undeveloped, such as is the case to the east and west of the airport, is to ensure that vacant areas are developed for noise-compatible uses so that the airport can operate in the future without the constraints which inevitably occur when there are major land use conflicts.

WHAT IS A PART 150 STUDY?

Part 150 of the Federal Aviation Regulations sets minimum planning standards for airport noise compatibility and establishes a general approach to conducting studies authorized under Part 150.

The Noise Compatibility Study is a two-fold program directed, first, toward aircraft noise control and, second, toward land use compatibility. Four features make such a study under F.A.R. Part 150 unique: it is the only comprehensive approach to preventing airport and community noise conflicts; implementation of the study recommendations is sought during the course of the study, rather than at the end; eligible items in the finally-approved plans may be funded from a special account in the Federal Airport Improvement Program; and a Noise Compatibility Study is the only airport study conducted primarily for the benefit of the airport neighbors.

STUDY PURPOSE

A Noise Compatibility Study conducted under F.A.R. Part 150 may serve one or more of three distinct purposes. First, the study may serve as the community's official plan for achieving compatibility between an airport and its aircraft operations, on the one hand, and the surrounding community and its residents and various land uses, on the other. This is the immediate objective of the Phoenix study.

The second purpose the study may serve, if the sponsor elects to do so, is to provide a basis for protecting the community, as airport operator, from lawsuits for noise damages. The Aviation Safety and Noise Abatement Act of 1979, the act which mandates F.A.R. Part 150, stipulates that an airport sponsor may submit to the United States Secretary of Transportation documentation of the present noise conditions around its airport and a forecast of noise levels five years in the future. When these documents are registered with the Secretary, with suitable public review, the owners of property purchased or developed after

that time are prohibited by the Act from bringing noise suits against the airport sponsor. Part I of this study, the Noise Exposure Maps, provides the necessary documentation for this purpose. Submission of the Noise Exposure Maps is voluntary and is not required by the FAA as a condition of the grant under which the study is conducted.

A third purpose of the study is to qualify the Airport to receive federal funding for eligible projects in the approved noise compatibility program. Part II of this study, the Noise Compatibility Program, provides the documentation required by the FAA for grant eligibility.

STUDY OBJECTIVES

Sky Harbor International Airport is the largest airport in Arizona and the regional focus of air transportation in the desert southwest. At Sky Harbor there are currently over 400 scheduled jet flights daily to all parts of the United States by 15 airlines, as well as charter flights to points throughout the world, and a based Air National Guard unit.

To protect this valuable resource, the Noise Compatibility Study was initiated with the following general objectives:

- Determine existing aircraft and background noise levels and identify the effects of such noise on vicinity land uses.
- Modify aircraft flight tracks, air traffic control procedures, and airport facilities in order to reduce noise and impacts on people.
- Restrict land development, in those areas where significant aircraft noise cannot be eliminated, to uses which are compatible with such noise exposure.

- Establish procedures for implementation of the plan and for continued monitoring and periodic review of the implemented program.

STUDY APPROACH

To meet these objectives, a study approach has been designed that will identify the current and anticipated noise exposure and related impacts, offer alternative methods for its abatement, and develop a realistic and implementable plan for decreasing and/or preventing noise-related conflicts between the airport and its neighbors. The study includes the following major steps:

- **Study Initiation** - Prepare materials necessary to introduce the project to the community and put administrative procedures in place.
- **Existing Conditions** - Assemble and organize relevant information and data on Sky Harbor International Airport and its surrounding area.
- **Forecasts** - Develop detailed estimates of future air traffic activity, by quantity and type.
- **Aviation Noise** - Determine the current and unabated future aircraft noise exposure levels within the airport environs.
- **Community Noise** - Determine the levels of noise associated with non-aviation sources within the study area for current and future conditions.
- **Noise Impacts** - Evaluate the number and intensity of impacts of aviation noise on the present and future resident population and land uses within the airport environs. This analysis will complete the compilation of data necessary for the preparation

of official F.A.R. Part 150 Noise Exposure Map documents.

- **Noise Alternatives** - Prepare and evaluate methodologies for the reduction of noise on land uses via the implementation of improved flight tracks and air traffic control procedures.
- **Land Use Alternatives** - Investigate current and potential methods for the management of land use development within those areas where noise will remain a long-term concern, and prepare noise mitigation techniques for any uses which will remain impacted.
- **Noise Compatibility Program** - Prepare a recommended plan for noise compatibility at Sky Harbor International Airport which incorporates the most effective and implementable techniques of noise abatement and land use management. The result of this phase of the project will be documentation in support of the formal submission of the Noise Compatibility Program under F.A.R. Part 150.

The study approach includes the direct involvement of the public and consultation with public agencies and aviation users throughout the planning process. This will be accomplished through the participation of a Planning Advisory committee (PAC) to review the work of the Consultant, and a series of public information meetings at key points during the study.

STUDY SPONSOR

The Airport Noise Compatibility Study is jointly sponsored by the cities of Phoenix and Tempe. The study is being conducted by the airport consulting firm of Coffman Associates, Inc., of Phoenix, Kansas City, and Anchorage. Financial

assistance is made available by the Federal Aviation Administration of the U.S. Department of Transportation through the Airport Improvement Program established by the Airport and Airway Systems Development Act of 1982. Federal funding for this program is derived from aviation user taxes on airline tickets, cargo, and aviation fuels.

PLANNING ADVISORY COMMITTEE

The PAC is a nonvoting advisory group established by the sponsor to assist the consultants in the performance of the study. The member's functions are to review and comment on working papers, provide a forum for discussion of issues, contribute ideas and potential solutions, assist the consultants in contacting individuals and agencies pertinent to the study, and from the constituent groups whom they represent on the progress and findings of the study. Represented on the PAC is the complete spectrum of interests in airport noise compatibility: airport political and technical branches

of government, airport neighbors, aviation users, and business and community leadership.

PUBLIC INVOLVEMENT

The general public is invited to play an important role in the study process. Public information workshops, where preliminary findings will be presented by the consultants and discussed with the participants, will be held at strategic points throughout the study.

Corrections and improvements to the working papers will be sought, and comments on succeeding work tasks will be encouraged in those meetings. Introductory brochures will be distributed at the beginning of the study to encourage public participation. Technical documents for formal Part 150 submission and summary brochures will be published at the conclusion of the study to inform the public of the study's conclusions and the noise abatement and land use management measures which they can anticipate to be taken.